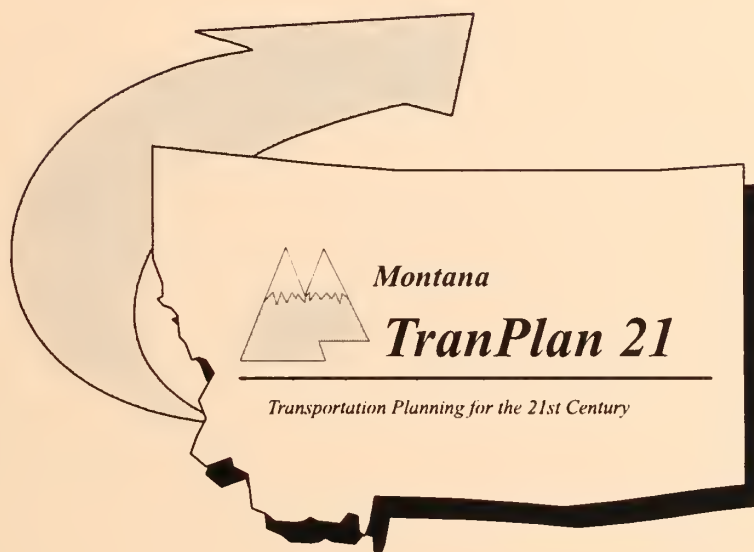


Volume II - IV and Technical Appendix



Montana Department of Transportation
February, 1995

Prepared by:
Dye Management Group, Inc.



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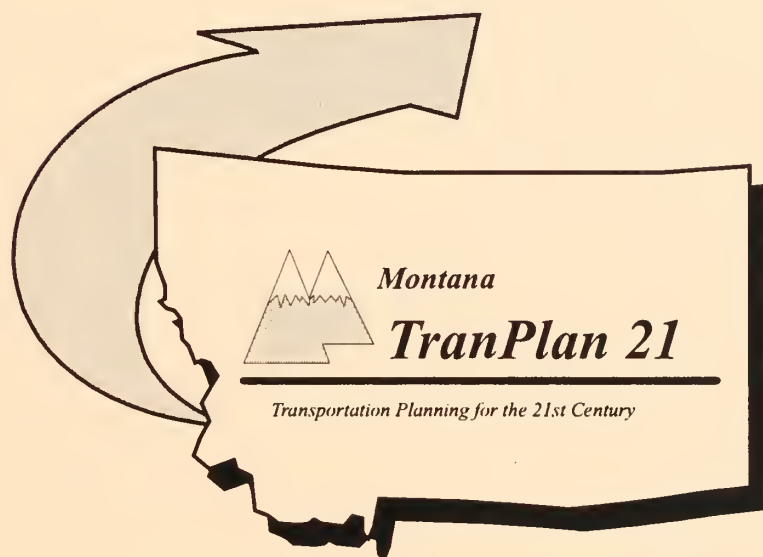
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Transportation System Analysis



Montana Department of Transportation
February, 1995

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Montana Department of Transportation

Volume II - Transportation System Analysis

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I. INTRODUCTION



Volume II Transportation System Analysis, is the second volume of TranPlan 21, Montana's statewide multimodal transportation plan. The volume reports the technical analysis that was undertaken as a basis for developing the policy goals and actions reported in Volume I. The volume is organized into the following sections.

Section I. Economic, Environmental, and Social Considerations.

This section evaluates the social and economic trends affecting the demand for transportation in Montana. Recent economic and population trends are analyzed and forecasts for the next twenty years are provided. The forecasts used are the same as those used by other state agencies for planning purposes. While economic and population forecasts are subject to revision, the conclusions drawn from the forecasts are not likely to change markedly should Montana experience faster or slower growth than forecast.

The environmental conditions which are to be addressed in implementing TranPlan 21 and improvements to interagency coordination and cooperation to ensure environmental protections are described. A list of all the sources of information on the environmental conditions that will affect transportation improvements is provided.

The values and priorities of Montanans regarding the future of the transportation system represent many of the social considerations addressed by TranPlan 21. Their values and priorities were determined through public meetings and a telephone survey. The results are documented in Volume IV Stakeholder and Citizen Issues and Priorities. They are summarized in this section.

Section II. Transportation System Designation.

This section designates the elements of Montana's multimodal transportation system that are addressed by the statewide planning process. The section includes the system designation criteria and applies these criteria to identify corridors, transfer facilities, passenger transportation services, and connectors.

Section III. Transportation System Analysis.

This section evaluates current and forecasts future demands for the use of the different elements of Montana's transportation system. The conditions of the existing transportation system and the

capabilities of the system as currently configured for meeting future demands are considered. The ability to establish achievable planning goals for meeting future travel demands is also assessed. This analysis is used to provide an informational basis for describing the key issues affecting the transportation system and the feasibility of public actions to address them.

The analysis considers: highways and bridges, public transportation, passenger rail, freight rail, air transportation, and pipelines. Pipelines are included because they provide a mode of transportation for shipping many commodities.

Section IV. Financing TranPlan 21. This section assesses the transportation funding programs available for implementing TranPlan 21. Current and forecast revenues are described and the element of the highway improvement program detailed. The key financial constraints that will affect the implementation of TranPlan 21 are described and the major financing issues that will arise over the next twenty years during the implementation of TranPlan 21 are identified.

II. Economic, Environmental, and Social Considerations



This section provides an analysis of the economic, environmental, and social considerations affecting the management and development of Montana's multimodal transportation system.

A. Economic and Demographic Considerations

The demands for transportation in Montana are largely derived from Montana's population and employment characteristics. This section provides an analysis of the industry and population trends in Montana that will shape transportation demands into the 21st century. The analysis is based on the consideration of past trends, social and economic forecast data. Following are the key economic and social considerations that are addressed:

- Expected statewide economic and population growth.
- The outlook for Montana's traditional economic base.
- The rise of Montana's emerging service economy.
- Population trends affecting transportation system needs.

1. Overview of economic and population change

The key features of economic and population change that affect the long range transportation demands addressed in TranPlan 21 include: population and employment growth, the continued importance of Montana's basic industries, the growth of Montana's service sector, and the uneven geographic location of economic and population growth.

a. Economic and population growth

Montana's economy was among the fastest growing in the nation during the early 1990s. In 1992, the nonfarm labor income in Montana increased by 5.1 percent compared to 3 percent for the nation as a whole. Statewide growth is predicted to taper off somewhat over the next few

years but continue to increase at a moderate pace (Montana Business Quarter, Spring 1994).

Long-term forecasts developed by National Planning Association Data Services and the Montana Department of Commerce indicate that moderate and stable economic growth will continue in Montana over the next twenty years. Statewide earning from wages, salaries and business profits are projected to grow at an annual average rate of 3.15 percent per year between 1990 and 2010. Significant employment and population growth is expected to accompany growth in income.

Montana's population is forecast to continue to grow at above the national rate through the 21st century. Exhibit II-1 shows the forecast population growth by Montana Department of Transportation financial district through 2010.

Exhibit II-1
Population Growth by MDT Financial District, 1990 to 2010

MDT Financial District	Annual Percent Change 1990 - 2010
Montana Average	0.78
Northwestern Region	1.38
Southwestern Region	0.75
Northcentral Region	0.33
Southcentral Region	0.93
Eastern Region	-0.02

Source: National Planning Association Data Services

Montana's population has been growing at a faster pace than in neighboring states as shown by Exhibit II-2.

Exhibit II-2

Population Growth of Western States, 1990 to 1993

Region/States	Population 1990 (Thousands)	Population 1993 (Thousands)	Percent Change 1990 - 1993
U. S. Average	248,710	257,903	3.7
Pacific Northwest States			
Washington	4,867	5,255	8.0
Oregon	2,842	3,032	6.7
Idaho	1,007	1,009	9.1
Rocky Mountain States			
Montana	799	839	8.0
Wyoming	454	470	3.5
Utah	1,723	1,860	8.0
Colorado	3,294	3,566	8.0
Upper Plains States			
North Dakota	639	635	-0.01
South Dakota	696	715	2.7
Minnesota	4,375	4,517	3.2
Canadian Average	26,838	28,191	5.04
Western Provinces			
British Columbia	3,191	3,456	8.3
Alberta	2,503	2,630	5.1
Saskatchewan	987	989	1.5
Manitoba	1,085	1,105	1.9

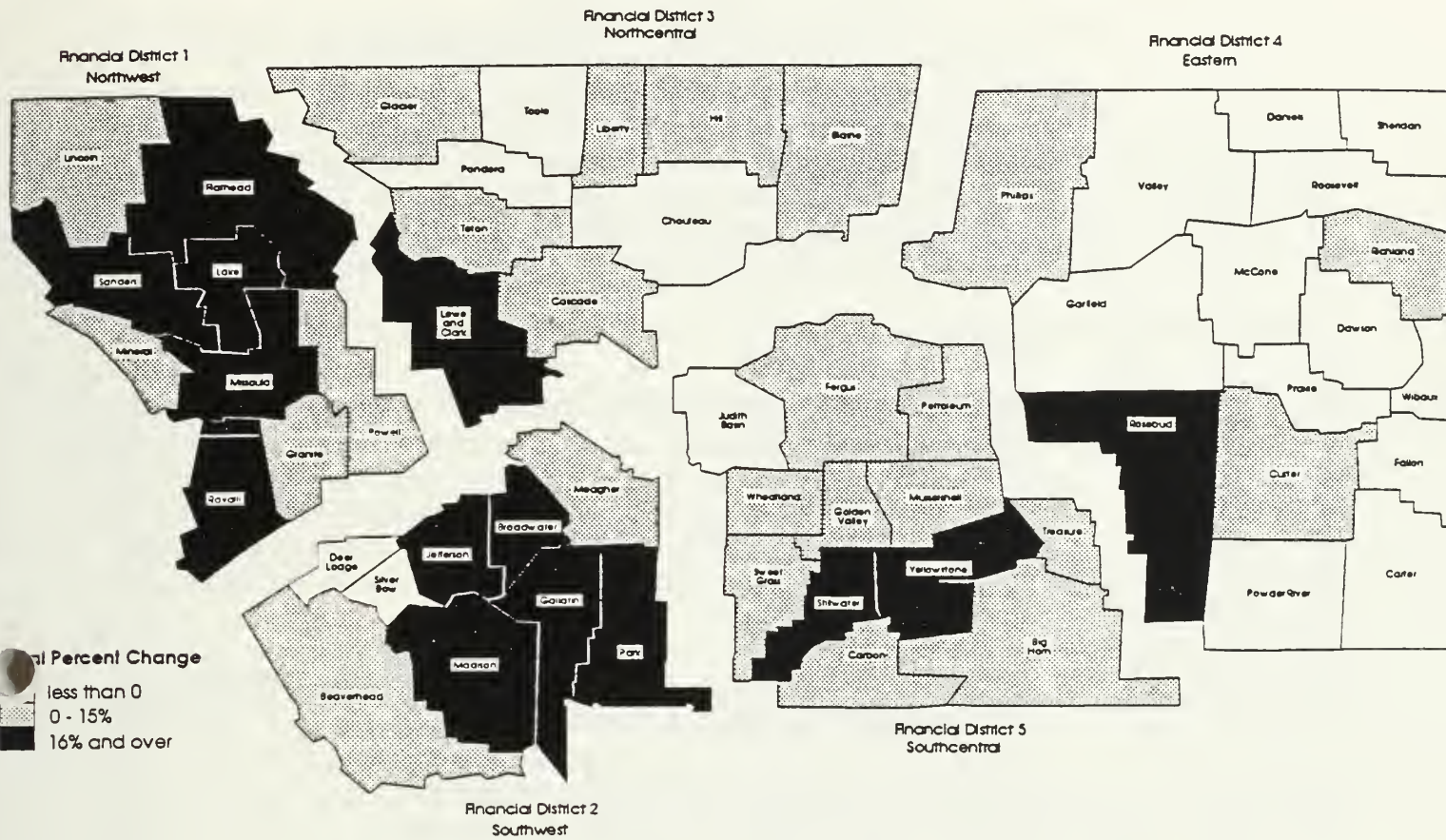
Source: U.S. Bureau of Census and Statistics Canada

To a large extent population growth in Montana's neighboring states and provinces mirrors population growth patterns within the state. Population in states and provinces to the west of Montana have been growing most rapidly during the early 1990s. In fact, Washington, Idaho, Utah, Colorado and British Columbia are among the fastest growing states and

provinces in North America. States and provinces to the east of the Rocky Mountains are generally growing more slowly. These population trends indicate that both Montana's U.S. and Canadian trading partners will tend to expand most rapidly from the west. Rapid growth in the western most states and provinces will also likely lead to an increased volume of freight traffic passing through Montana on route to and from other major trading areas. Particular growth is expected from the north as the North American Free Trade Agreement and the Canadian Free Trade Agreement provide a catalyst for increased Canadian and U.S. trade.

Overall, Montana's projected economic and population trends indicate a state with distinct regional differences in future transportation challenges. In the western and southcentral portion of the state there will be significant pressure to provide for the transportation needs of a growing number of service-related businesses as well as for an increasing number of urban commuters. Simply maintaining the quality of the existing transportation system may be challenging for the northcentral and eastern regions of Montana. A declining population base combined with a slow growing regional economy is indicative of a weakening local tax base. Regions with a weakening local tax base generally experience both reduced public and private sector investment in the local transportation system.

Exhibit II-3 Population Growth by County, 1990 to 2010



b. Traditional economic base

Agriculture and natural resource based industries, along with nonresident travel and federal government expenditures provide a stable economic base for the state of Montana. Individual industries such as agriculture and oil and gas have experienced significant swings in economic fortunes over the past twenty years. However, as a group, Montana's basic industries have consistently contributed labor earnings well over \$2 billion dollars annually between 1970 and 1993. TranPlan 21 addresses the future transportation needs of these traditional basic industries.

c. Service sector growth

Montana's economy has changed in recent years most notably through the growth of service industries and will continue to change, generating different transportation demands. Private service industries such as health care, recreational activities, legal services, and management consulting are among the fastest growing in Montana as well as in the nation as a whole. Earnings in these industries are projected to double over the next twenty years.

Service-related businesses generate different transportation demands than the traditional basic industries. For example, Montana's traditional basic industries of agriculture, mining and wood products rely heavily on the motor carrier and rail road industries to meet their transportation needs. However, new service businesses are more likely to utilize package delivery services, air transportation and electronic media to support their day-to-day business activities.

Exhibit II-4
Forecast Growth by Sector
Wages, Salaries and Business Profits, 1990 to 2010
(valued in 1987 dollars)

Sector	Projected Income, 1990 (Millions of Dollars)	Average Annual Income, 2010	Growth Rate
Total, All Industries	\$6,756	\$11,003	3.15
Agriculture, Forestry and Mining	669	974	2.29
Construction	358	645	3.98
Manufacturing	561	729	1.49
Transportation/Utilities	654	934	2.14
Retail/Wholesale Trade	1,131	1,889	3.35
Private Services	1,983	3,810	4.60
Government Services	1,395	2,023	2.25

Source: National Planning Association Data Services

Private service industries such as health care, recreational activities, legal services, management consulting and computer support will lead Montana's growth into the next decade. Earnings in these industries are projected to double over the next twenty years. In contrast, the state's traditional basic industries in agriculture, forestry, mining, manufacturing and transportation are expected to grow at an annual pace of less than 2.3 percent between 1990 and 2010. As these service-related businesses continue to become a more dominant component of Montana's economy, transportation needs within the state will also change.

d. Uneven growth

The growing role of service-related businesses in the Montana economy is one broad economic trend that will influence future transportation needs. The geographic location of expected growth is an equally important consideration. Projected earnings from wages, salaries and business profits for each of Montana Department of Transportation's (MDT) five Financial Districts are compared in Exhibit II-6. The regional differences are highlighted in Exhibit II-7.

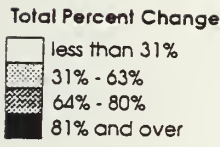
Exhibit II-5, Growth in Total Wages, Salaries and Business Profits by Financial District, 1990 - 2010

Financial District	Total Percent Change 1990 - 2010
Montana Average	63
Northwest District	72
Southwest District	79
Northcentral District	46
Southcentral District	65
Eastern District	52

In general, Montana's urban centers and their surrounding rural counties are expected to grow most rapidly. The urban areas tend to have the most diversified economies with a higher concentration of rapidly growing service-related businesses. In particular, the southwestern and northwestern regions of the state are well-positioned for future economic growth. These regions will likely benefit from both expanded tourism and established growth industries including health care, universities, business support services and other rapidly growing services. Future growth will build from established urban centers such as Bozeman (Gallatin County), Missoula (Missoula County) and Kalispell (Flathead County). The benefits of economic growth in these established urban centers are expected to spread out into the surrounding rural counties.

The region surrounding Montana's largest population center, Billings (Yellowstone County), also is anticipated to experience significant new economic growth over the next twenty years. Yellowstone, Big Horn, Carbon and Rosebud Counties each have projected total earnings growth rates in excess of the statewide average. To the north of Billings, significant economic growth is expected in Fergus and Judith Basin Counties. Like western regions of the state, tourism and service-related businesses will be a primary source of growth in the southcentral region. Expanded coal mining activity may also contribute to the region's future growth.

Total Wages, Salaries and Business Profits Projected Percent Change 1990 -2010



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Economic forecasts indicate a considerably slower business growth rate in the northcentral and northeastern regions of Montana. No significant new transportation demands are anticipated in these regions.

Future population growth is expected to continue recent trends and build around established urban centers, as shown in Exhibit II-7.

Exhibit II-7 Population Growth in Rural Areas Surrounding Rapidly Growing Cities

	Population 1980	Population 1990	Population 1992	Annual Percent Change 1980-90	Annual Percent Change 1990-92
Cascade County					
Great Falls City	56,725	55,097	56,628	-0.3	1.4
Rural Cascade County	23,971	22,594	22,640	-0.6	0.1
Flathead County					
Kallispell City	10,648	11,917	12,456	1.2	2.3
Rural Flathead County	41,318	47,301	50,401	1.5	3.0
Gallatin County					
Bozeman City	21,645	22,660	23,826	0.5	2.6
Rural Gallatin County	21,220	27,803	30,049	3.1	4.0
Lewis & Clark					
Helena City	23,938	24,569	25,719	0.3	2.3
Rural Lewis & Clark	19,101	22,926	23,942	2.0	2.2
Missoula County					
Missoula City	33,388	42,918	44,522	2.9	1.8
Rural Missoula County	42,628	35,769	37,894	-1.6	3.0
Silver Bow County					
Butte City	37,205	33,336	33,555	-1.0	0.3
Rural Silver Bow County	887	605	573	-3.2	-2.6
Yellowstone County					
Billings City	66,798	81,151	84,011	2.2	1.8
Rural Yellowstone County	41,237	32,268	34,052	-2.2	2.8

Source: U.S. Bureau of Census

A detailed look at the data indicates that a significant portion of future growth is likely to occur in rural areas that surround the city limits. During the early 1990s, population growth in surrounding rural areas exceeded the rate of growth within city boundaries in each of Montana's fastest growing urban centers.

Future settlement patterns will create transportation demands that will be difficult to serve by public transportation and that will impact capacity at the regional level. Urban population sprawl increases pressure on the capacity of the regional transportation system. Roads and highways connecting new residential centers with urban employment centers will receive increased traffic volumes that lead to new capacity concerns. Projected population trends indicate that transportation issues associated with increased volumes of urban commuters will be most prevalent in the two western and southcentral financial districts.

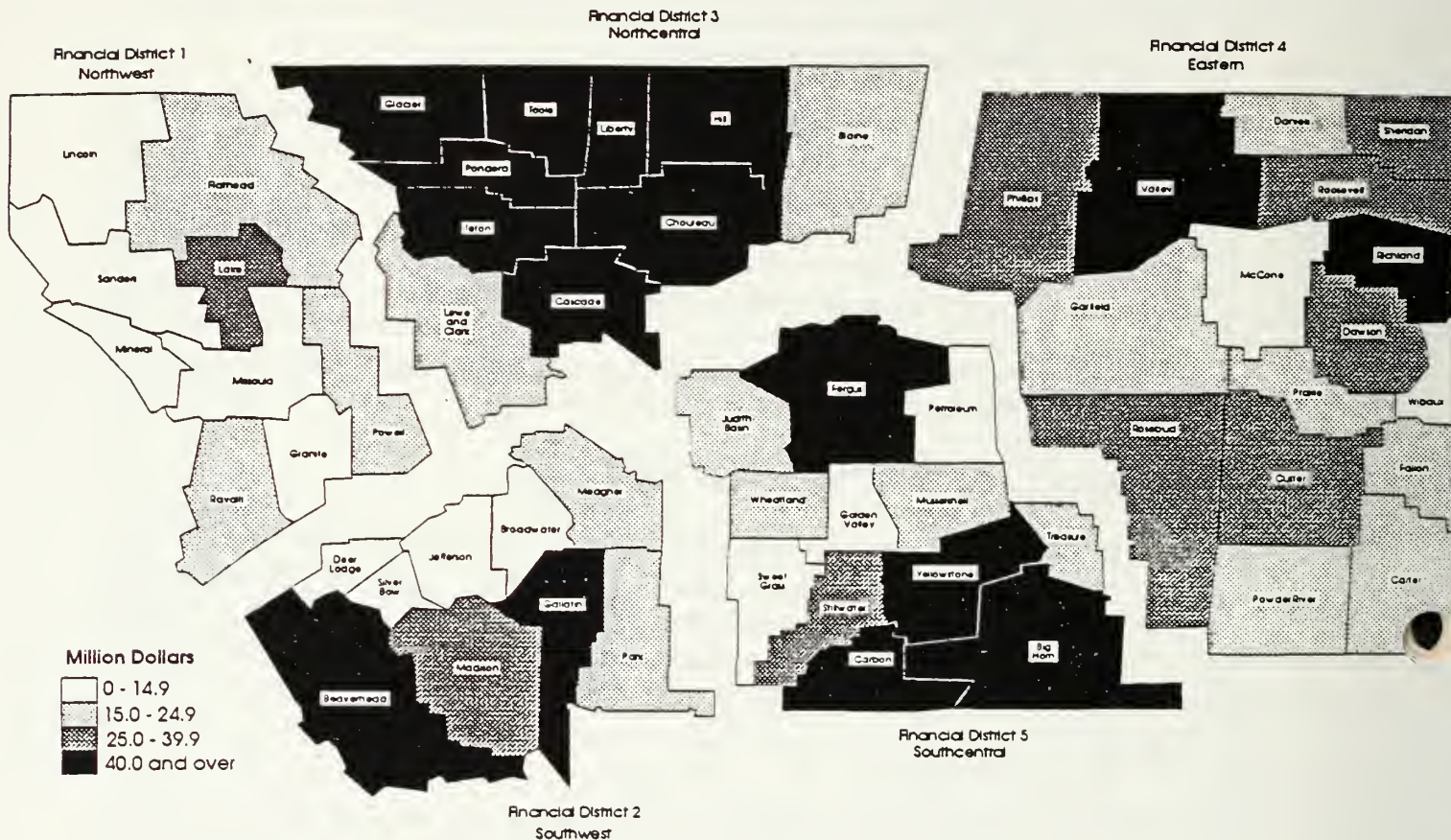
2. Montana's Traditional Economic Base

Historically, Montana's economy was built on a foundation provided by agriculture, mining and wood products and other manufacturing. These industries will continue to generate transportation demands for the shipment of bulk commodities from throughout Montana to national and international markets. The basic industries and their transportation needs are discussed in turn.

a. Agriculture

Montana agriculture generates about \$2 billion in annual cash receipts. U.S. Department of Agriculture statistics document that agriculture is an important component of the economy in nearly all Montana counties, as evident in Exhibit II-8. About 80 percent of the agricultural cash receipts are generated in the three MDT financial districts east of the Rocky Mountains. Among Montana's counties, Chouteau and Yellowstone generated the most agricultural receipts--\$135 million and \$127 million, respectively in 1992. Cattle, wheat and barley are Montana's three largest agricultural commodities.

Exhibit II-8 Cash Receipts From Farm Marketings by County in 1991



Source: Montana Agricultural Statistics Service

Exhibit II-9
Agricultural Cash Receipts by Financial District, 1991

MDT Financial District	Agriculture Cash Receipts 1991 (thousands of dollars)
Montana Total	\$1,502,033
Northwestern Region	126,063
Southwestern Region	202,197
Northcentral Region	552,100
Southcentral Region	402,626
Eastern Region	438,128

Total cash receipts from crops and livestock in Montana have increased moderately over the past decade. Dr. Myles Watts, Professor of Agricultural Economics at Montana State University, forecasts agriculture will continue to be a major contributor to the Montana economy. However, a wide array of issues may affect the overall profitability of Montana agriculture. For example, crop and cattle prices are subject to wide variation as a result of changes in the world market. Such changes are difficult to forecast in advance.

Assuming past trends provide an accurate prognosis for the future, agricultural industries will continue to be a major user of the Montana transportation system. Due to the bulky nature of agricultural commodities, efficient rail transportation is particularly important. Ninety-two percent of Montana's wheat crop was shipped out-of-state by rail in 1993. Rail's share of the Montana grain transport business has increased steadily since the early 1980s.

The dominance of rail as the mode of choice for Montana grain shipments translates into reduced road damage and potentially safer rural highways on long-haul grain transportation corridors. However, this advantage may be offset by new use of semi-trailer trucks for short-haul farm to elevator movements. To gain efficiencies in the rail transportation system, rail reloading and grain storage facilities have been consolidated into fewer locations. As a result of the longer haul from the field to the elevator system, many local farmers find it more efficient to utilize five axle tractor-trailers rather than the traditional two axle farm truck. Not only

are there more road miles being generated due to longer hauls from the field to the elevator, but the weight of the vehicles is increasing.

Looking to the future, Montana's grain regions face two major freight transportation challenges. Firstly, maintaining an efficient rail system that is of growing importance to Montana grain farmers, and secondly maintaining the performance of the key secondary system farm to elevator routes utilized by Montana growers.

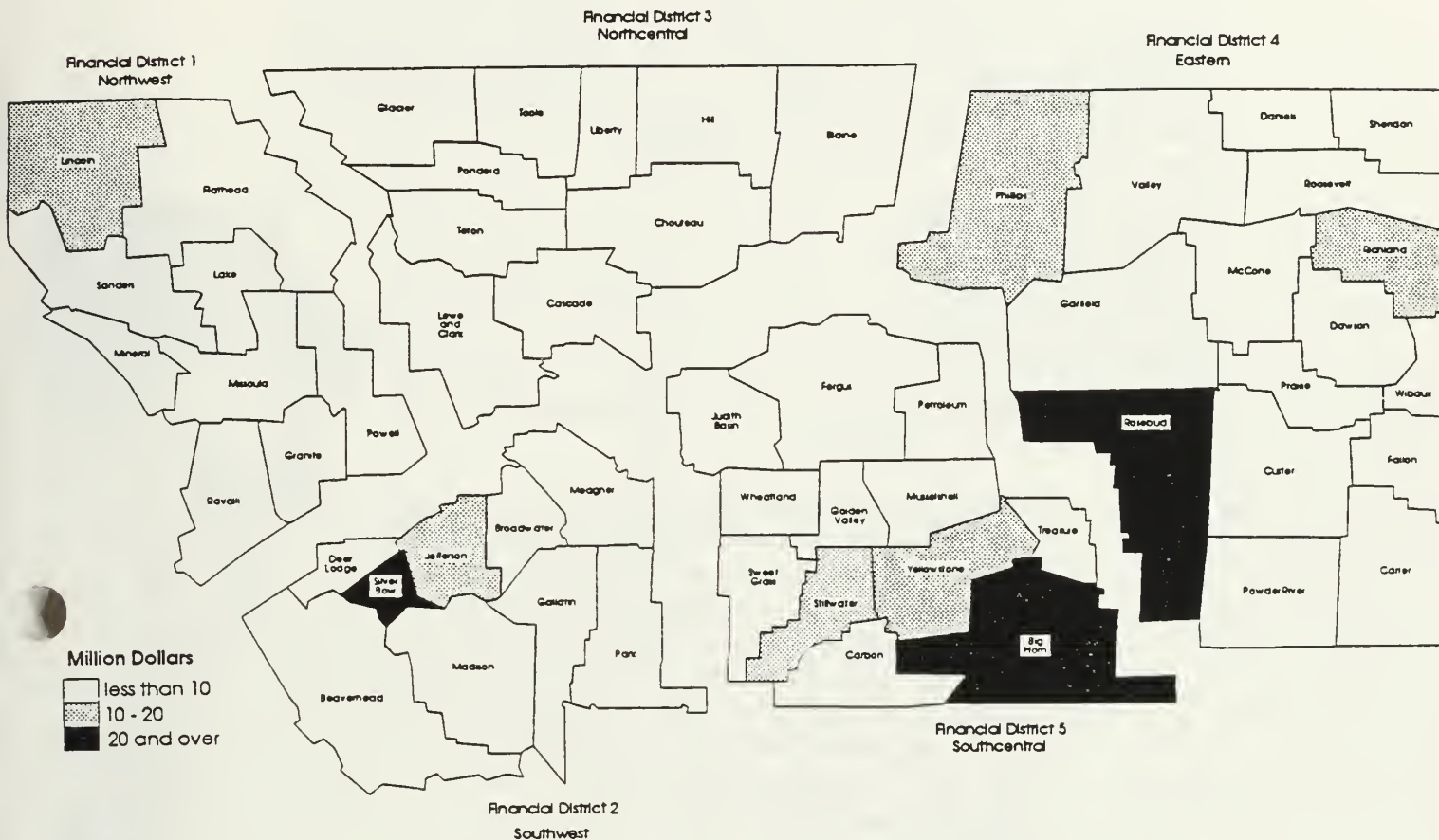
b. Mining

Mining is a second traditional mainstay of the Montana economy. In 1993, Montana mining industries generated over \$250 million in wages, salaries and business profits. Montana's largest current centers of mining activity are located across the southern tier of the state, as shown in Exhibit II-10 and Exhibit II-11.

Non-fuel mineral mining accounts for more than 80 percent of Montana's current activity. The non-fuel minerals industry includes several sectors: metal mining (gold, silver, platinum and copper) and nonmetal minerals such as sand and gravel. The value of non-fuel mineral production in Montana peaked at \$685 million in 1988 with higher metal prices. However, the value of production has fallen by 30 percent since then as metal prices have declined. The future of Montana's non-fuel mineral mining industries is closely linked to world metal prices. If metals prices should once again rise to mid-1980 levels, a resurgence in Montana's mining activity can be expected.

Coal mining also takes place in Montana. Approximately 40 million tons of coal are taken from Montana mines annually. However, the current rate of coal mining does not begin to tap the extensive reserves available throughout the state. Montana's coal reserves are greater by a considerable margin than any other U.S. state. Like non-fuel mining activity, coal mining is closely tied to world energy prices. A major increase in world oil and gas prices would likely lead to expanded coal mining activity in Montana.

Exhibit II-10 Wages, Salaries and Business Income from Mining Activity by County, 1993



Source: National Planning Association Data Services

Exhibit II-11
Earning from Mining Activity, 1993

MDT Financial District	Earnings From Mining Activity 1993 (thousands of dollars)
Montana Total	\$250,100
Northwestern Region	28,600
Southwestern Region	65,300
Northcentral Region	17,200
Southcentral Region	17,300
Eastern Region	54,600

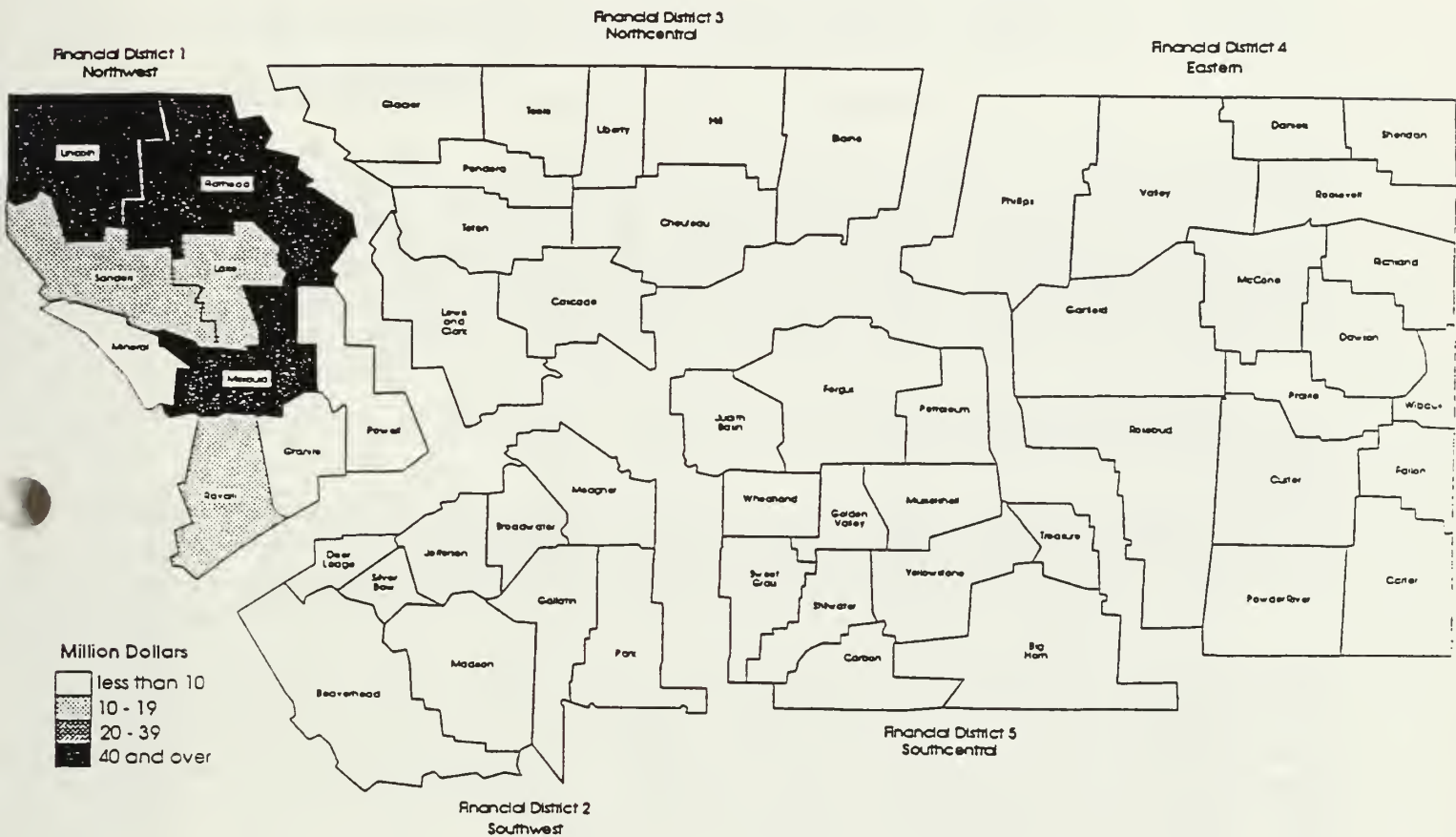
Overall, the potential for expanded mining activity in Montana is significant. Historic trends suggest that the rate of mining extraction for both non-fuel minerals and coal will likely go through significant swings over the next twenty years depending on changes in world markets. This potential suggests a special challenge for Montana transportation planners. Uncertainty over the duration of potential mining activity expansions makes it more difficult to plan for and justify major transportation system investments that may be needed to support increased volumes of mineral shipments. However, this problem is somewhat mitigated by recent economic diversification in Montana's primary mining communities. With increased diversification, major swings in mining activity are less likely to produce the boom and bust cycles witnessed during the 1970s and 1980s. As a result, long-term transportation needs in mining dependent areas will become more predictable.

c. Wood Products

Data compiled by the University of Montana's Bureau of Business and Economic Research indicates the 1993 sale value of Montana's wood and paper products was nearly \$1.4 billion. Wood products processing activity is concentrated heavily in the northwestern half of the state, as shown in Exhibit II-12.

Exhibit II-12

Montana's Wood Products Manufacturing Industries Heavily Concentrated in the Northwestern Region Total Labor Earnings, 1992



Source: U.S. Bureau of Economic Analysis

Note: As a result of undisclosed county-level data from the U.S. Bureau of Economic Analysis it is not possible to accurately calculate totals for Montana MDT Financial Districts.

The key factors influencing future Montana wood products production and timber shipments are:

- Much lower timber offerings from National Forests.
- Limited availability of timber on private industrial lands.
- The potential for expanded harvests from non-industrial private forest lands.
- A trend toward increased value-added processing of limited timber supplies.

The timber industry in the Northwestern and Rocky Mountain Regions of the United States is undergoing a major restructuring that will have implications for future transportation needs of the industry. Dramatically lower timber offerings from National Forests will influence both the future level of wood products processing and the geographic location of timber harvests. In the late 1980s, more than 510 million board feet per year were harvested from Montana's National Forests. According to the U.S. Forest Service, National Forest timber offerings will likely fall to well under 200 million board feet by the late 1990s.

Volumes of standing timber on private industrial lands simply are not adequate to make up for the shortfall caused by reduced supply from National Forests. Private non-industrialized timber lands are the wild card for Montana's future timber supply over the next twenty years. Recently, the harvests from non-industrial private timber lands has more than doubled compared to the late 1980s. Private land owners are responding to dramatically higher stumpage prices offered over the last two years. Higher stumpage prices are due to a limited timber supply combined with a strong national demand for lumber products. Provided the national economy remains strong and construction growth continues, it is reasonable to assume price incentives will remain to encourage increased timber sales from private non-industrialized timber lands.

Reduction in timber available from Montana's National Forests combined with a potential increase in timber harvested from private non-industrial timber lands has implications for the state's transportation system. Timber supply projections prepared by the University of Montana School of Forestry indicate that the total volume of Montana timber shipments will likely decline by at least 25 percent by the end of this decade. The state's National Forests are located primarily in the western regions of Montana. Private non-industrial timber lands tend to be located in the central and eastern regions of the state. Consequently, the anticipated supply shifts will focus future logging and associated transportation needs farther to the east than has been traditional in Montana.

The current industry trends also suggest potential changes in the volume and geographic location of timber processing activity. Most observers of the Montana forest products

industry expect some reduction in overall wood products processing activity over the next twenty years. However, the decline in processing activity is not anticipated to be as great as the decline in timber availability. This prediction assumes a continued strong international economy and corresponding strong demand for wood products. As timber becomes more valuable, utilization of formerly unprofitable materials becomes profitable. A national trend towards more value-added local processing of available timber makes it possible to employ more people and higher wood products sales with a lower volume of raw logs. For example, dimension lumber that may have previously been exported to other states or countries for further processing is now more likely to be made into furniture or recreational equipment at the local level creating new employment and income opportunities.

Montana trends in wood products processing will also lead to changing transportation system demands. In particular, the trend towards increased value-added processing may place increased volumes of wood products on Montana's highways. A survey of newly established industries in the state of Washington found that producers of specialized value-added wood products are considerably more likely to utilize highway transportation to ship products than producers of saw-timber who are more likely to utilize rail transportation.

Industry trends also suggest a potential decentralization of timber processing activities. Specifically, reduced timber supplies in the west combined with potential increased supplies in the eastern half of the state provides incentive for relocation or development of processing facilities farther to the east than traditional processing centers. The site requirements of potential new value-added wood products manufacturers enable owners to choose locations outside of traditional wood manufacturing regions.

Overall, wood products industry trends suggest significant changes in longer-term transportation use. Most importantly is the potential shift from concentrated activity in the far western counties to locations in central and eastern Montana. Timber processing facilities are likely to be more dispersed reducing wood products volumes within the far western regions and increasing traffic volumes on highways in central and eastern Montana. Provided Montana follows the national trend towards more value-added wood processing, the reliance on highways for wood products shipments will increase while the reliance on the rail system will decrease.

d. Diversified Manufacturing

The U.S. Bureau of Economic Analysis estimates labor earning from manufacturing activities at nearly \$731 million dollars in 1992, as evident in Exhibit II-13. Lumber and wood products is the dominant Montana industry providing 40 percent of the total manufacturing earnings. The remainder represents a diversified group of manufacturers ranging from sugar beet processing to primary metals to petroleum refining.

Exhibit II-13
Montana Has Expanding Diversified Manufacturing Sector

Manufacturing Industry	Labor Earnings 1992 (millions)	Percent of Total Manufacturing Earnings 1992	Percent Earnings Growth 1990 - 1992
<i>Total Manufacturing</i>	730,994	100	27.43
Lumber and Wood Products	292,837	40.06	20.13
Manufactured Food Products	66,024	9.03	3.90
Printing and Publishing	59,051	8.08	37.76
Primary Metals	58,685	8.03	27.61
Petroleum and Coal Products	52,595	7.19	42.26
Paper Products	39,231	5.37	13.6
Miscellaneous Manufacturing	31,231	4.27	172.88
Stone, Clay and Glass	28,937	3.96	28.55
Chemical Products	21,870	2.99	21.98
Fabricated Metal Products	17,054	2.33	59.07
Machinery and Equipment	16,335	2.23	22.65
Apparel and Textile Products	13,200	1.81	61.72
Furniture and Fixtures	8,308	1.14	55.23
Instrument Products	7,779	1.06	130.42
Electrical Equipment	6,264	0.86	65.32
Motor Vehicles	5,180	0.71	67.04

Source: U.S. Bureau of Economic Analysis

While lumber and wood products will likely continue to be the largest manufacturing industry over the next twenty years, the data points to a trend towards increased diversification. Petroleum and coal products, furniture and fixtures, instrument products and apparel are examples of Montana's fastest growing manufacturing industries.

In general, Montana manufacturing activity is concentrated in urban centers. In 1990, Montana's seven major urban counties accounted for nearly three-quarters of the statewide manufacturing activity. Measured by 1990 annual earnings, Flathead and Missoula have the largest concentration of manufacturing activity, as shown in Exhibit II-14.

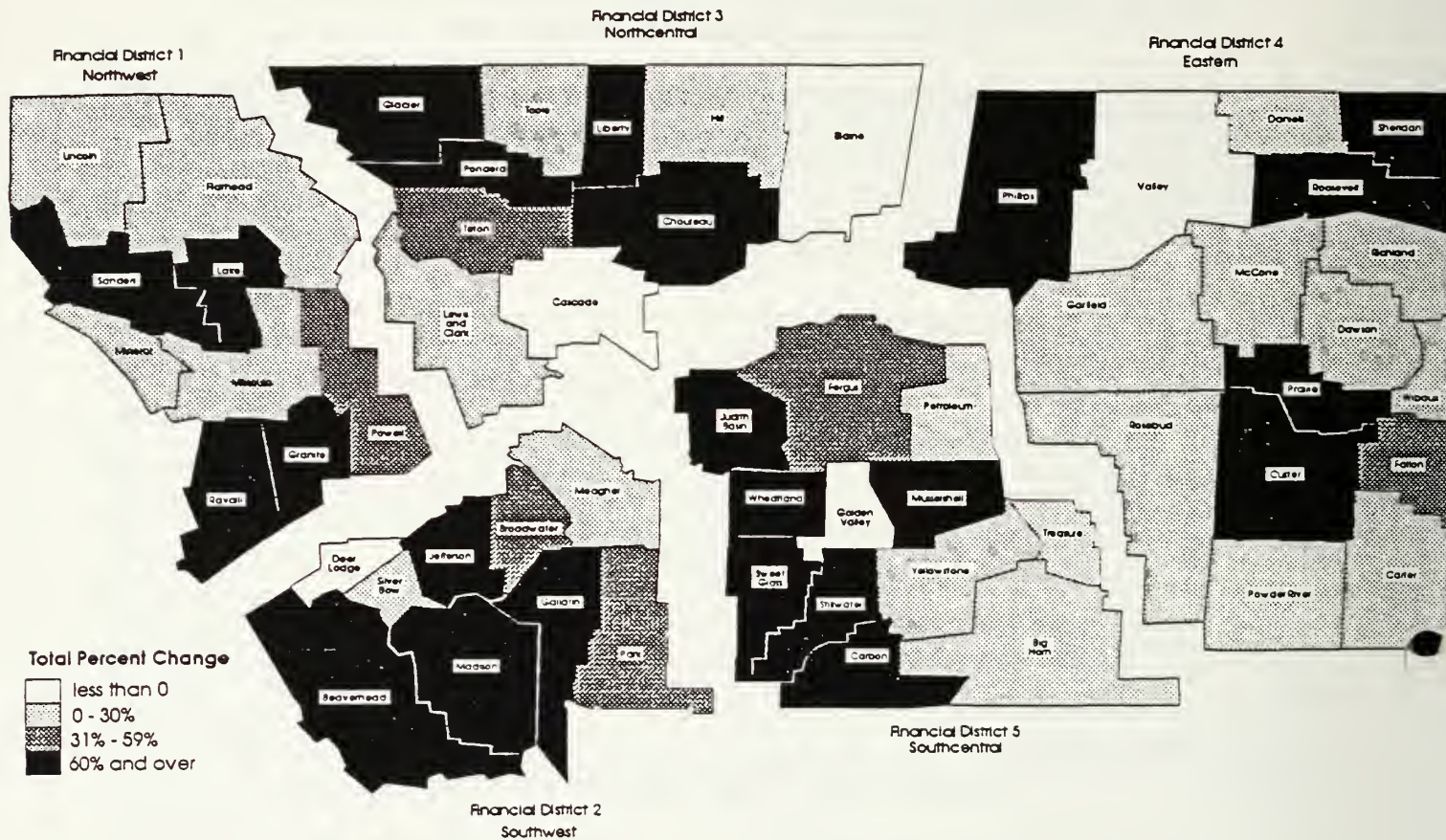
Exhibit II-14
Rural Counties Expected to be Future Focus
for New Manufacturing Development

	Manufacturing Earnings 1990	Manufacturing Earnings Projected 2010	Annual Percent Change 1990 - 2010
Montana Total	561.8	728.8	0.99
Urban County Total	405.8	485.8	0.99
Cascade	23.2	5.7	-3.77
Flathead	109.8	135.8	1.18
Gallatin	33.3	59.4	3.92
Lewis & Clark	20.9	22.2	0.31
Missoula	113.4	141.2	1.23
Silver Bow	13.6	15.2	0.59
Yellowstone	91.6	106.3	0.80
Rural County Total	155.8	243	2.80

Source: National Planning Association Data Services

Long-term economic projections for Montana indicate a trend towards decentralization of manufacturing activity over the next twenty years. Manufacturing earnings in Montana's rural counties are expected to grow at an annual rate three times that of urban counties between 1990 and 2010, as shown in Exhibit II-15 and exhibit II-16. Consistent with general economic trends of the state, rural counties adjacent to urban areas typically are among the fastest growing manufacturing centers. However, a number of more isolated counties such as Sheridan, Custer, Phillips and Roosevelt Counties are projected to be among the fastest growing manufacturing counties over the next twenty years.

Exhibit II-15
Manufacturing Wages, Salaries and Business Profits
Projected Percent Change 1990 - 2010



Source: National Planning Association Data Services

Exhibit II-16 Manufacturing Wages, Salaries and Business Profits

MDT Financial District	Annual Percent Change 1990 - 2010
Montana Average	30
Northwest District	33
Southwest District	57
Northcentral District	-22.5
Southcentral District	23
Eastern District	53

Montana's decentralization of manufacturing into more rural areas is consistent with national trends. The growth manufacturing industries tend to be relatively small value-added products that can efficiently be produced outside of major urban centers. Location near major markets and suppliers is becoming less important for manufacturing industries compared to the past. Because new plants tend to be relatively small, the labor force limitations of rural counties is less of an issue. The rise of advanced information technologies enables plant managers to stay in touch with remote markets from almost any location.

The potential for an increased level of diversified manufacturing with a particular focus on new development in rural counties is again an indicator of increased future truck volumes on rural highways. The greatest increases in truck traffic will likely occur in rural counties adjacent to established metropolitan areas across the southern tier of the state. As many of the growing rural manufacturers sell to national and international markets, access to quality air transportation in rural counties will also become more important.

3. Montana's service economy

Montana's service sector has experienced rapid growth in recent years and is forecast to continue growing into the 21st century. The service sector includes personal/business services such as health care, data processing, and legal services; financial services such as banks and insurance companies as well as retail and wholesale trade. Wage, salary and business profits earnings from private service enterprises has grown steadily in Montana since the mid 1970s. Earnings from service-related businesses continued to grow even while Montana's timber, mining and agricultural industries staggered during the late 1970s and early 1980s.

Private services are projected to continue to grow at a rapid pace over the next twenty years as shown in Exhibit II-17 below.

Exhibit II-17
Wages, Salaries and Business Profits
Average Annual Growth Rate – 1990-2010

	Annual Percent Growth Rate 1990 - 2005
Elderly care	4.5
Computer and data processing services	4.4
Hospital services	4.0
Management and public relations consulting	3.9
Water and sanitation services	3.3
Vocational and other schools	3.3
Office of health practitioners	3.1
Travel agents	3.0
Social services	3.0
Equipment rental and leasing	3.0

Source: National Planning Association Data Services

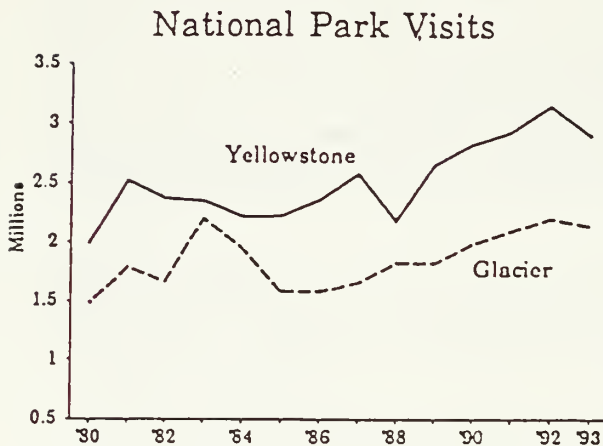
The rapid growth of private services in Montana mirrors economic trends throughout the entire nation. Nationwide, the top ten growth industries identified by the U.S. Bureau of Labor and Statistics are all service-related categories, they are shown in Exhibit II-18. Much of the service growth in Montana and the United States is due to an aging and more affluent population, a growing demand for business support services as well as an expanded concern for environmental quality. Health care and elderly care, for example, are at the top of the list of growth industries in Montana as well as for the nation as a whole. Along with the expanded use of personal computers in the workplace, comes the need for businesses that provide computer and data support services. An increasingly complex and rapidly changing business environment has generated demand for legal and other services such as management consulting. Concern for environmental quality has spawned the need for specialized services such as water and sanitation.

4. Tourism

Montana's service sector is benefiting from significant growth in tourism and recreational travel. The University of Montana's Institute for Tourism and Recreation Research estimates that more than 6 million nonresidents entered Montana by car in 1993. This compares to an estimated 4.5 million nonresident visitors entering Montana by car during the mid 1980s. Montana airport deboarding also grew substantially over the past three years at airports serving tourist destinations. Nearly one million nonresident visitors entered Montana by air in 1993.

Montana's National Parks and ski resorts are among the most popular travel and tourism destinations. Visitor counts at both National Park and ski areas have increased steadily during the 1990s.

Exhibit II-19 National Park Visits and Ski Visits 1980 to 1993



Charts prepared by The University of Montana,
Bureau of Business and Economic Research

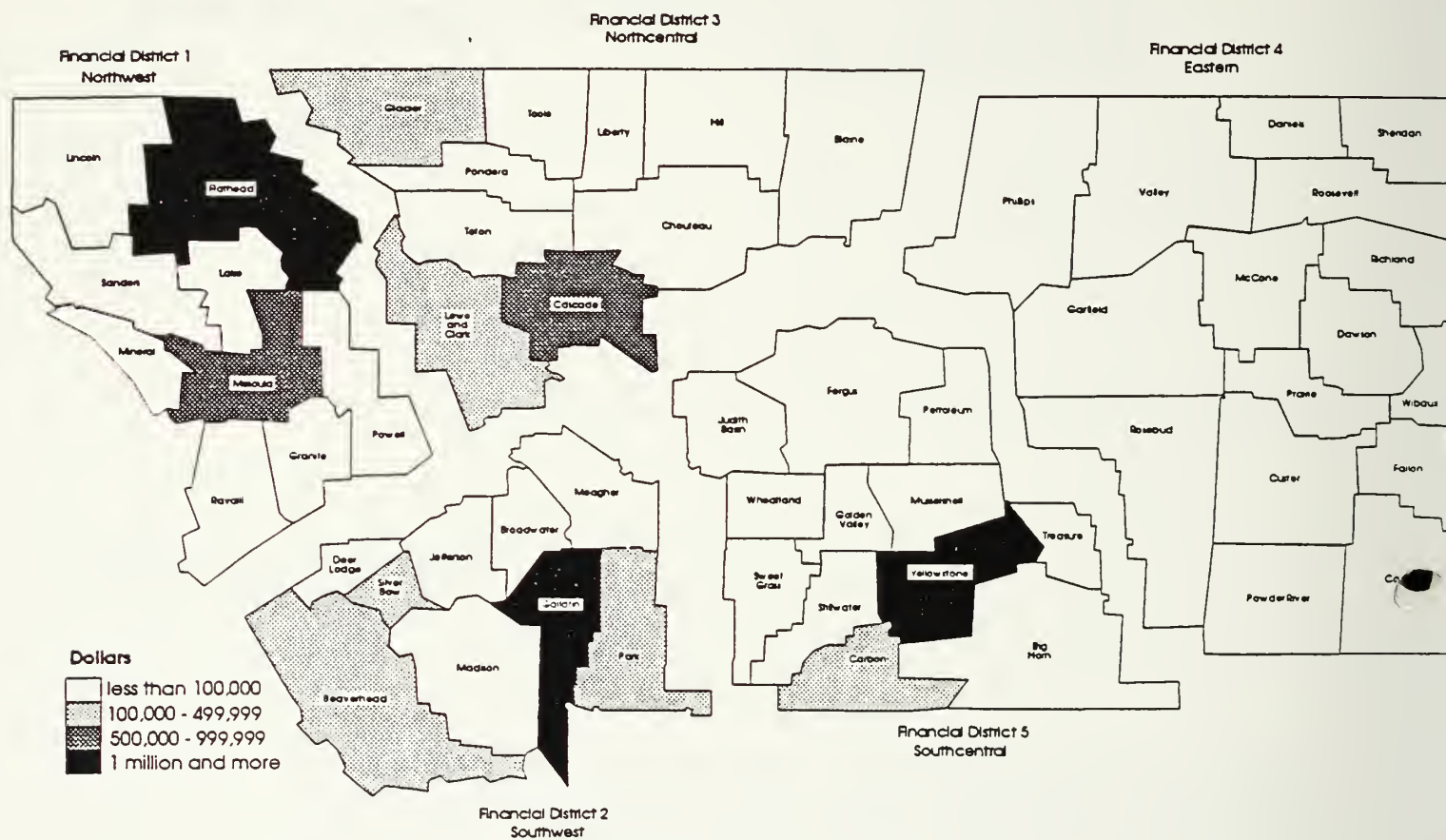
The geographic location of tourism affects transportation demands. County level accommodations tax collections are one measure of the regional focus of travel and tourism within Montana, as shown by Exhibit II-20 and Exhibit II-21. Three Montana counties (flathead, gallatin and yellowstone) had accommodation tax collections in excess of one million dollars in 1993. Each of these counties are a center of business travel as well as in close proximity to major tourism destinations.

Nonresident travel and tourism is expected to continue to grow over the long-term. Several trends including a growing population in the United States and Canada with increased leisure time will contribute to continued growth of tourism. As Montana's economy continues to grow, additional business travel can be expected. However, the extent of future growth is closely linked to both national and international economic trends. For example, international exchange rates, particularly with Canada, make it less attractive for Canadians to visit the United States. In times of national economic recession, Americans have less discretionary income to spend on tourism and business travel is more limited. Consequently, nonresident travel in Montana is expected to go through modest

upswings and downswings over the next twenty years but continue the general growth trends of the past five years.

The growth of Montana tourism raises new issues for statewide and regional transportation planning. In particular, as visitor numbers increase, traffic volumes on key routes utilized by tourists also increase. Particularly for destination areas served by secondary roads, issues of congestion and potential safety problems may become more prevalent.

Exhibit II-20
Accommodations Tax Collections, 1991



Source: Montana Department of Commerce

Exhibit II-21
1993 Accommodations Tax Collections

MDT Financial District	Accommodations Tax Collections, 1993
Montana Total	\$7,963,585
Northwestern Region	2,231,932
Southwestern Region	2,477,081
Northcentral Region	1,508,148
Southcentral Region	1,360,651
Eastern Region	382,720

Nonresident travel along with changing consumer and business needs have contributed to a major growth of private service-related activity in nearly all Montana counties. Historically, service-related businesses have tended to concentrate in major population centers. To illustrate, a comparison of Montana's rural and urban county private service sector earnings per capita appears in Exhibit II-22. Counties that draw customers from outside their local boundaries have the highest level of service earnings per capita. Residents of counties with relatively low service earnings per capita are more likely to commute elsewhere for a significant portion of their service needs. On average, 1990 private service earning per capita are more than twice as high in Montana's seven major urban counties compared to rural counties. This data reflects a trend towards the development of service centers in larger population centers. These service centers provide for the needs of their local population as well as residents of surrounding rural counties.

Exhibit II-22
Private Services Concentrated in Urban Centers
But Future Growth in Rural Counties is Anticipated

	Per Capita Private Service Earnings 1990	Per Capita Private Service Earnings Projected 2010	Annual Percent Change 1990 - 2010
Montana Average	\$3,978	\$6,349	5.84
Urban County Average	5,027	7,694	5.31
Cascade	5,265	7,882	4.97
Flathead	3,978	6,349	5.96
Gallatin	4,125	6,801	6.49
Lewis & Clark	4,971	7,933	5.96
Missoula	4,886	7,192	4.72
Silver Bow	4,168	6,837	6.40
Yellowstone	6,190	9,243	4.93
Rural County Average	2,361	3910	6.56

Source: National Planning Association Data Services

A closer examination of projected private service sector growth indicates a modest trend toward future decentralization of private service activity as a result of expanded growth in Montana's rural counties. Overall per capita earnings from private services are expected to grow at an annual rate of 6.6 percent in rural counties compared to only 5.3 percent in urban counties.

Significant private service-related growth is expected for nearly all Montana Counties. The most rapid growth is expected in urban centers and their surrounding rural counties. However, several of the more isolated rural counties such as Blaine, Valley, Garfield, Wibaux and Rosebud also are projected to have growth rates of private services faster than the statewide average of 83 percent between 1990 and 2010.

Exhibit II-23
Montana's Most Rapidly Growing Service Industries

Service Sector	Labor Earnings 1987 (millions)	Labor Earnings 1992 (millions)	Earnings Growth 1987-92 (millions)	Percent Earnings Growth 1987-92
Retail Trade				
Eating & Drinking Places	194,720	284,996	90,287	46.63%
Auto Dealers & Service Stations	146,672	209,082	62,410	42.55%
Food Stores	137,713	188,864	51,151	37.14%
Personal & Business Services				
Health Care	582,508	878,197	295,689	50.76%
Finance, Insurance & Real Estate	311,342	396,969	85,627	27.5%
Amusement & Recreation	45,498	95,963	50,465	110.92%
Engineering & Management Services	120,500	194,117	73,617	61.09%

To some extent the more rapid growth of rural service-related businesses reflects the influence of Montana's growing tourism and recreation industries. In addition, decentralization of services from urban centers to rural counties reflects a nationwide trend that began in the late 1980s. U.S. Bureau of Economic Analysis statistics indicate that between 1989 and 1991 service-related employment grew significantly faster in the nation's nonmetropolitan counties compared to metropolitan areas. This trend is expected to continue throughout the next decade.

Exhibit II-24

Per Capita Private Service Earnings

MDT Financial District	Annual Percent Change 1990 - 2010
Montana Average	83
Northwest District	98
Southwest District	98
Northcentral District	66
Southcentral District	81
Eastern District	74
Eastern Region	7.48

Rural locations are becoming increasingly feasible as a profitable location for emerging new service businesses. A growing number of highly skilled professionals are choosing small rural communities for the perceived quality of life and utilizing electronic media to tap into information sources and world markets. An example cited in a recent New York Times article is Jim Stack, who runs Investitech Research, a high-tech investment consulting firm. Mr. Stack employs nine people and serves about 15,000 clients, including corporations, 97 percent of whom are outside Montana. Investitech operates out of a 6,500 square foot combination home-office located on Whitefish Lake. The growing number of rural service businesses such as Mr. Stack's have much different transportation needs than the traditional rural industries. In particular, convenient access to air passenger service, quality telecommunications and frequent package delivery service are important considerations.

Overall, expectations for future development of Montana's private service economy suggests new demands for the statewide transportation system, particularly in rural counties. Rural counties located adjacent to Montana's established population centers and those near National Parks and major recreation destinations are the most likely to be impacted by changing transportation needs. Transportation systems that provide rural residents with access to services in urban centers such as health care will continue to be an important need.

5. Social Changes

Population growth, changes in the age composition of employment, and household income are all social considerations that will affect the demand for transportation into the next century.

a. Population change

Population growth forecast by county is shown in Exhibit II-3. Overall population is projected to grow twice as fast in the seven major urban counties compared to the remainder of the state. In Montana's predominantly rural eastern region, population decline is projected for a number of counties.

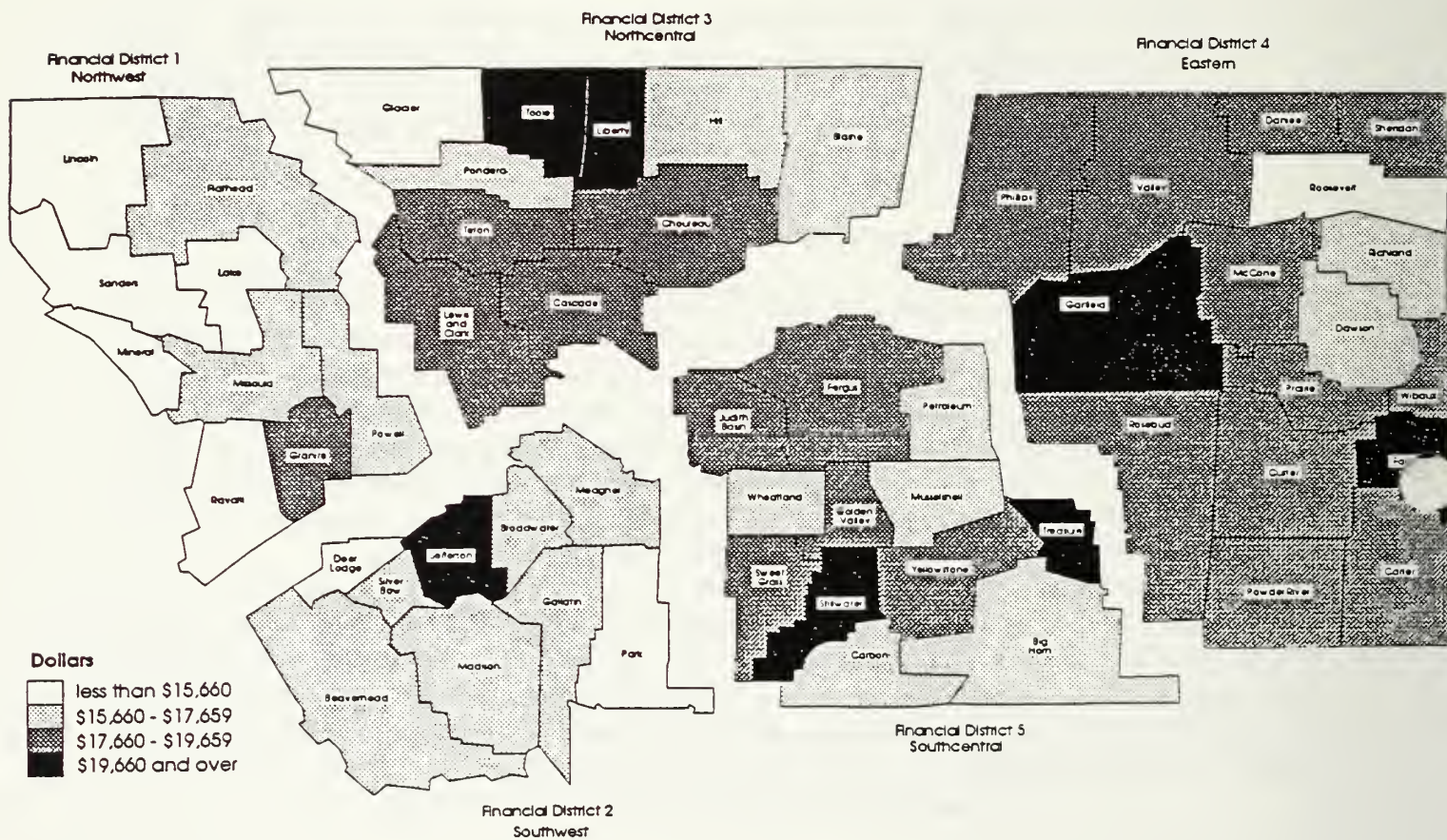
b. Personal income

The numbers of people living in different regions of the state are an important consideration in planning for the future statewide transportation system. The resources available to the local population is another important factor. For example, lower income residents may have more difficulty in purchasing and maintaining adequate personal transportation. In addition, counties with a higher proportion of low income residents often have less local resources to maintain and improve local components of the transportation system.

The 1990 Census of Population reported Montana's per capita personal income \$13,348 compared to over \$16,500 for the United States. National Planning Association Data Services estimates that Montana's personal income will increase by approximately 33 percent over the next twenty years. However, while making advances, Montana's per capita income is expected to remain well below the U.S. average.

A comparison of projected 2010 personal income for Montana's counties is shown in Exhibit II-25. Projected per capita income for most counties falls within \$2,000 either above or below the statewide average of \$17,661. In general, counties in the western half of the state tend to have projected incomes below the statewide average and counties in the eastern half of the state tend to have projected incomes above the average expected for Montana in the year 2010, as evident in Exhibit II-26. This difference is partly explained by the relatively heavy concentration of seasonal occupations in timber, recreation and tourism in the western half of the state compared to the east.

Exhibit II-25 Projected Per Capita Income by County, 2010



Source: National Planning Association Data Services

Exhibit II-26 Projected Per Capita Income

MDT Financial District	Projected Per Capita Income, 2010
Montana Average	\$17,661
Northwestern Region	16,011
Southwestern Region	17,011
Northcentral Region	18,128
Southcentral Region	18,289
Eastern Region	18,325

c. Age composition

According to the 1990 census, Montana has 60,820 residents between the ages of 65 and 74 and 45,790 persons older than 75. Residents over the age of 75 are among the most likely to have physical difficulties that prohibit driving. For these residents, access to transportation from family, friends or transit service is often most critical. The number of Montana residents in the 75 year or older age category is projected to increase about 0.5 percent per year over the next two decades which is slower (about one-half) the annual growth rate projected for the population as a whole.

Of importance for future transportation planning is the fact that Montana's oldest residents live throughout the entire state. In 1990, approximately one-half of the residents 75 years or older lived in rural counties outside of major population centers. While future growth of these older residents is expected to occur primarily within Montana's seven major metropolitan areas, a significant number will continue to live in rural communities.

A particular challenge rises out of the fact that low-income and elderly residents are dispersed widely throughout the state. Meeting the transportation needs of these special population groups is both logistically difficult and potentially expensive. Creative paratransit and transit solutions appropriate for low population density regions will be required.

The age composition of Montana's population affects transportation demand. Older residents are more likely to have personal mobility problems compared with younger residents. Regions with a high

concentration of older residents may have a greater need for effective transit or paratransit programs. Older residents, 75 years or older, live throughout the state of Montana but population forecasts indicate that the numbers will increase primarily in urban counties, as shown in Exhibit II-27.

Exhibit II-27
Forecast Distribution of Elderly Population Through 2010

	Residents 75 Years or Older 1990	Residents 75 Years or Older 2010	Annual Percent Change 1990 - 2010
Montana Total	45,790	50,710	0.5
Urban County Total	23,560	28,000	1.0
Cascade	4,220	5,060	1.0
Flathead	3,190	3,490	0.5
Gallatin	1,820	2,360	1.5
Lewis & Clark	2,330	3,300	2.1
Missoula	3,520	4,400	1.3
Silver Bow	2,620	2,310	-0.5
Yellowstone	5,860	7,080	1.1
Rural County Total	22,230	22,710	0.1

Source: National Planning Association Data Services

B. ENVIRONMENTAL CONSIDERATIONS

Managing the existing transportation system and meeting new mobility needs in a manner that protects the environment and helps to preserve the unique quality of life in Montana is an important transportation planning goal. The quality of Montana's natural environment is important to its citizens and the state's future economic well being. The natural environment and the amenities that it offers support economic diversification. For example, there are now more Montanan's dependent upon outfitting than lumber for their employment.

The approach taken to address environmental protection at the long-range planning level adopted in TranPlan 21 involves two interrelated elements:

- Ensuring that there is an established process for effective early communication and coordination between the different agencies involved with transportation and environmental protection.
- Recognizing the need to have information, and understand its implications, about the environmental conditions which project planning could impact, early on in the project development process.

1. Effective early coordination and communication

There are a number of agencies with complex and overlapping mandates and different missions in the areas of environmental planning, permitting and document processing that affects the transportation system. The relationship between transportation and the natural environment is formally recognized by the Intermodal Surface Transportation Efficiency Act, the National Environmental Policy Act, the Clean Air Act and its amendments, the Clean Water Act of 1977, Endangered Species Act of 1977, and several other mandates. These mandates are all addressed in transportation investment decisions and project development.

TranPlan 21 recognizes that the key environmental planning issue for transportation is the need to address environmental considerations prior to project design through better coordination and communication. Currently, environmental impacts are usually addressed at the project level. This is because our regulatory procedures are designed to identify the environmental impacts of a proposed project and then ensure that the appropriate mitigation steps are taken to reduce them.

The following steps are needed to ensure that environmental considerations are most effectively addressed:

- **Improved information about preexisting environmental considerations to address environmental protection prior to project development.** Identifying environmentally sensitive areas early on in the project development process will benefit environmental protection efforts by ensuring that environmental issues are addressed proactively, rather than through reactive mitigation.
- **Coordination and communication with other agencies regarding environmental considerations prior to project development.** Improved interagency coordination and cooperation can engage the primary agency responsible for the management and regulation of specific environmental considerations in helping to define transportation solutions that are affordable and have less environmental impact.

2. Preexisting environmental conditions

To integrate environmental concerns into transportation planning, TranPlan 21 describes the impacts of preexisting environmental considerations on project development, identifies those areas of the state with the greatest environmental sensitivities, and provides a comprehensive inventory of data sources on environmental conditions. In this way, TranPlan 21 provides information that can be used to identify, prior to advance planning, transportation related environmental issues that could arise.

Although the information presented is not exhaustive, it does provide a listing of environmental considerations that are important from a statewide perspective and are regulated by state or federal agencies. The information presented can in no way be a substitute for project specific environmental assessments or environmental impact statements, rather it is intended to help to identify preexisting conditions and thus more accurately scope project alternatives and costs.

Highway construction, reconstruction, maintenance, and the use of Montana's transportation system by all modes has some environmental impacts. The significance of these impacts depends upon the environmental sensitivity of the areas in which improvements are being made. Environmental impacts of high concern include the conversion of agricultural land, loss of wetlands, loss of habitat for endangered species, storm water runoff and many others.

Preexisting environmental conditions describe those environmental considerations that must be mitigated at the project level. For example, a wetland or a stream is a preexisting environmental condition which, if affected by a proposed project, must have any adverse impacts appropriately mitigated. A key planning need is to improve the information and understanding available about preexisting environmental conditions so that they can be taken into consideration prior to project selection and design.

The Federal Highway Administration's 1987 Technical Advisory Guidebook describes the environmental considerations evaluated during environmental assessments and environmental impact studies. The conditions relating to environmentally sensitive areas and the natural environment are described below. Economic and social impacts and land use are addressed elsewhere. Considerations not applicable to Montana, for example coastal zones and coastal barriers, and project specific considerations, such as construction impacts are not discussed.

The following lists the key environmental considerations that affect the management and development of the transportation system:

- Land ownership.
- Air quality.
- Water quality
- Wetlands.
- Water body modification and wildlife.
- Floodplains.
- Wild and scenic rivers.
- Threatened and endangered species.
- Historic and archeological sites.
- Hazardous waste sites.
- Visual quality and aesthetics.
- Energy.

These environmental considerations affecting transportation improvements and system management are described in turn. The environmental regulations and their implications are discussed briefly. In general the regulation of each of these environmental considerations requires, at the project level, the identification of alternatives to anticipated impacts, and methods of mitigation for unavoidable consequences. The source of additional information about each consideration is provided. Exhibit II-29 at the end of this section, provides a reference guide to state and federal agencies involved with environmental regulation and the data bases that are available that describe pre-existing environmental conditions.

a. Land ownership

The compatibility of land uses with the transportation infrastructure and efforts to preserve rights of way are the most critical land ownership issues facing the MDT. Land owners include private parties, local governments, state and federal agencies, and tribal governments. Local, state and federal regulations affect each of these entities differently.

(1) Publicly owned park land

Highway improvements on any type of publicly owned park land are subject to very specific requirements. Title 23 of the Code of Federal Regulations 771.135, Section 4(f) of the Department of Transportation Act, applicable to transportation-public land conversion proposals, states that "The (Federal Highway Administration) may not approve the use of land from a significant publicly owned park, recreation area, or wildlife and waterfowl refuge or any significant historic site unless a determination is made that:

- (a) There is no feasible and prudent alternative to the use of land from the property; and

- (b) The action includes all possible planning to minimize harm to the property resulting from such use."

This act ensures that the conversion of these categories of public lands for transportation purposes are adequately analyzed and that transportation is indeed the highest and best use of the land. A large amount of land in Montana falls under this requirement. Whether or not a road passes through park land is therefore very important for corridor and project planning.

(2) Private land

The regulation of private lands is largely a local government function. There is no county wide zoning in any county in Montana. Therefore, right of way problems that complicate the project development process occasionally arise. Other environmental hazards, such as underground storage tanks, can also be found on private lands. These hazards can be problematic for the MDT because they are often not acknowledged until after a project has been initiated. Mitigation of environmental conditions often adds to the cost of projects and can cause lengthy delays.

The identification of preexisting environmental conditions on private lands is often difficult due to a general lack of documentation. These lands are regulated by local governments. Unlike other states little information can be obtained from local inventories of land ownership and applicable land use regulations. Information regarding private land ownership and known conditions does not exist in any detail at the municipal or county level.

Private lands are subject to all normal environmental regulations and restrictions, but the interest of the MDT most often lies in the preservation of rights of way and related easements.

(3) State land

Similar to private lands, environmental conditions on state lands are often not documented. State lands are often leased to private parties for agricultural, mining, or other uses under the premise that any potential negative impacts will be avoided or mitigated.

In Montana, state lands are monitored and controlled by the Department of State Lands, Land Administration Division.

Documentation of existing environmental conditions generally does not exist prior to a site specific environmental assessment, when issues are identified by the Department of State Lands in conjunction with other state and federal agencies. Although the Department of State Lands does not maintain a data base of environmental conditions, documentation does exist for some previously studied areas and some leased lands (Montana Department of State Lands, 1994).

Environmental conditions on state lands, in relation to transportation infrastructure, are typically only identified once an application for a right of way is filed. Once the application is entered an environmental assessment is performed to determine impacts to the physical environment and human population (Checklist Environmental Assessment, 1994).

(4) Forest Service land

The construction or expansion of transportation infrastructure on Forest Service lands involves the identification of jurisdictional boundaries and interjurisdictional cooperation. Lease-hold agreements, right of way easements, and other factors can become issues on Forest Service land. However, other environmental issues can also be present, often relating to forest management concerns.

National forests are managed by the United States Department of Agriculture, Forest Service. Jurisdictional boundaries and lease holders are documented by forest management plans and maps, in addition to United States Department of Interior, Bureau of Land Management maps (Bureau of Land Management, 1994).

Specific information concerning the ten national forests in Montana can be obtained from forest supervisors.

(5) Tribal land

Indian reservations in Montana are recognized as sovereign governments and accordingly have independent decision making authority. Therefore, the MDT must coordinate its planning and programming efforts with tribal governments when reservation lands are involved. According to the Bureau of Indian Affairs, the federal liaison with tribal governments, documentation of existing environmental conditions on reservations is largely incomplete.

Title Status Reports document Indian reservation land ownership similar to a deed. These reports document the physical and legal land rights associated with ownership. Other information available from the Bureau of Indian Affairs include regularly updated maps of roads on reservations and environmental reviews of specific parcels of land. Environmental reviews are performed only at the time of title transfer, leaving a majority of tribal lands unassessed (Bureau of Indian Affairs, 1994).

Information concerning tribal land ownership and known environmental conditions can be found at the Montana branch of the Bureau of Indian Affairs, headquartered in Billings. In addition, a number of the reservations have started to develop detailed land use inventories identifying critical and sensitive areas.

(6) National Park land

Two national parks occupy portions of Montana. Glacier National Park covers parts of MDT districts 1 and 3 and the portion of Yellowstone National Park in Montana is all within district 2. National parks are managed by federal agencies, independently of the state. However, issues concerning park boundaries, transportation access, and environmental protection mandate coordination between the National Park Service and the MDT.

Similar to national forests, maps documenting the boundaries of national parks are available from the Bureau of Land Management (Bureau of Land Management, 1994). Statewide and local township-level area maps are available from the state headquarters or from field offices located throughout the state. More intensive environmental information is available from park headquarters or the United States Department of Interior, National Park Service.

(7) Recreation and parklands

Numerous state, county, and community parks exist within Montana. Numerous other public and private recreational areas are also present across the state. These areas have cultural, economic, tourist, and other values that can be affected by transportation projects and programs.

The identification of these areas prior to advanced project and program planning or development yields better decision making and management.

(8) Bureau of Land Management and other lands

Similar to other land classifications, the jurisdictional boundaries and the preexisting environmental conditions on Bureau of Land Management lands are important to the MDT. Coordination between different levels and branches of government can become complex and time consuming, depending upon the degree to which goals and objectives conflict.

The Bureau of Land Management divides the state into six areas, each having a representative office. These offices maintain regularly updated statewide and area maps that detail the boundaries of Bureau of Land Management, private, and other land. Further information regarding non-Bureau of Land Management land is available through the Montana Department of Fish, Wildlife, and Parks, who maintain a parks inventory. No formal data base currently exists that documents existing environmental conditions on Bureau of Land Management land.

(9) Agricultural lands

Agricultural lands are classified under the authority of the 1981 Farmland Protection Policy Act that seeks "...to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses." Four classes shape the hierarchy of farmland: Prime, unique, farmland of statewide importance, and farmland of local importance.

The United States Department of Agriculture, Soil Conservation Service maintains a data base of prime and unique farmlands. Information contained in this data base can be accessed on a broad statewide basis, in the form of county maps, or from detailed aerial photographs (U.S. Department of Agriculture-Soil Conservation Service, 1994).

In general terms, transportation projects that call for either the conversion of farmlands or otherwise adversely affect them are required to evaluate alternatives. Alternative strategies may include corridor realignments or other methods to avoid negative farmland impacts. If alternatives do not reduce or eliminate potential negative impacts, mitigation strategies should be included in the project proposal or plan (Federal Highway Administration, 1987).

b. Air quality

The primary air quality concern in Montana is conformance with federal pollution standards. National Ambient Air Quality Standards are defined by the United States Environmental Protection Agency for a variety of pollutants, including carbon monoxide and suspended particulate matter. These toxins are by-products of vehicle operation, industry, agriculture, and other sources. Missoula, Billings, and Great Falls do not meet standards for carbon monoxide. Several other communities are in violation of particulate matter standards. They include: Butte, Columbia Falls, Kalispell, Lake Deer, Libby, Missoula, Polson, Ronan, Thompson Falls, and Whitefish.

The implications of being a "non-attainment area" involve a series of efforts intended to improve air quality. Specific measures to ensure conformance with federal standards will be outlined in the forthcoming State Implementation Plan Conformity Revision (Air Quality Bureau, 1994).

c. Water quality

Water quality is a growing concern in Montana. Roadway run-off and its impact on stream and water body quality has become an issue across the state. The principle linkage between water quality and the transportation system is roadway run-off, which is a non-point pollutant. Oil, rubber, fuel, and other vehicular by-products that cause roadway run-off have prompted state and federal regulations designed to control pollution.

At the federal level, the Environmental Protection Agency ensures compliance with the Clean Water Act. Statewide, the Montana Department of Health and Environmental Sciences, Water Quality Bureau enforces water quality standards mandated by the Administrative Rules of Montana. Coordination between MDT and the Environmental Protection Agency is recommended to address stormwater management and consistency with the State Nonpoint Source Management Plan for clean water. MDT efforts to identify potential water quality impacts related to transportation projects and the development of alternatives or mitigation strategies could produce effective outcomes when formulated in unison with the Environmental Protection Agency and the Water Quality Bureau.

d. Wetlands

Avoidance and/or minimization of impacts to wetlands and streams by highway improvements is a state and federal policy goal. In recent years wetlands have become the subject of increased government protection. The three classes of wetlands in Montana are defined as areas with a presence of hydrophytic vegetation, hydric soils, and wetland hydrology: Category I-ponds, Category II-marshes, and Category III-stream zones (Draft Environmental Impact Statement, F-501(9)6, U.S. Highway 93 Evaro-Polson, Missoula and Lake Counties, Montana, 1994).

Transportation impacts on wetlands are evaluated in the context of the wetland's importance, for example ground water recharge or wildlife habitat, and the severity of the impact, over the short and long term.

If a proposed MDT project is in conflict with a wetland an environmental impact study must detail the type, quality, and function of the wetland involved. Next, the environmental impact statement must describe the impacts of the proposed transportation project on the wetland, evaluate alternatives that would avoid negative impacts, and consider practical strategies to mitigate unavoidable damage. If negative impacts cannot be avoided, a detailed explanation and a mitigation plan should be presented (Federal Highway Administration, 1987).

e. Water body modification and wildlife

Any alteration to the natural features of a water body is regulated by state and federal governments. The intent is to protect the quality of wildlife habitat.

Transportation projects that may alter "...the bed or banks of any stream or river in Montana" require a Stream Protection Act permit from the Department of Fish, Wildlife, and Parks, Fisheries Division (Montana Index of Environmental Permits, 1993). Stream Protection Act permits, also known as "124 permits", are issued on the basis of impacts to fish and game habitat. These permits are only issued after the Department of Fish, Wildlife, and Parks has determined that the proposed project poses no risk or that the mitigation efforts are adequate. The Department of Fish, Wildlife, and Parks maintains a data base of water bodies requiring 124 permits.

Any project that involves federal waterways is regulated by the United States Army, Corps of Engineers. "Under Section 10, Rivers and Harbors Act of 1899, any structure or work on, over, or under navigable waters requires authorization from the U.S. Department of the Army,

Corps of Engineers. In addition, a permit is required under Section 404 of the Clean Water Act for the placement of any dredged or fill material into United State's waters or wetlands" (Montana Index of Environmental Permits, 1993).

Project environmental assessment reports should detail the location of all water bodies subject to 124 or 404 permits and the environmental impact study; if required, should discuss the extent of anticipated modifications. These modifications include virtually any man-made change to the natural flow and character of the water body. State efforts to identify and mitigate modifications should be coordinated with the U.S. Fish and Wildlife Service.

The implication of these requirements is that to reduce environmental impacts and hence environmental permitting requirements, the number of highway stream crossings should be minimized. Taking the presence of stream crossings into consideration at the planning level will also provide a better estimate of project timing and costs.

f. Floodplains

In order to minimize danger to life and property, local and state agencies restrict development in floodplains. These restrictions also apply to transportation infrastructure.

National Flood Insurance Program regional maps, developed by the Federal Emergency Management Administration, are the most comprehensive source of floodplain information. A 100-year flood flow is established for the base, which outlines the floodplain area. However, although Federal Emergency Management Administration maps cover the majority of the state, the level of detail is improved by the Montana Department of Natural Resources and Conservation Floodplain Office. The most reliable documentation of floodplains can be found at the local level, where county planning offices are responsible for maintaining detailed floodplain maps (Montana Department of Natural Resources and Conservation Floodplain Office, 1994). Combined, these sources provide a good overview of pre-existing floodplain conditions.

Similar to other environmental considerations, anticipated transportation project impacts on floodplains should be evaluated for their extent and severity, alternatives should be identified, and mitigation strategies should be listed if no acceptable alternatives are feasible (Federal Highway Administration, 1987). The Montana Department of Natural Resources and Conservation reviews proposals and issues permits for projects that encroach or cross designated floodplains that are not regulated by local

governments. Some local governments manage floodplains within their municipal boundaries, while most others rely on the state to enforce minimum statewide standards (Montana Index of Environmental Permits, 1993).

g. Wild and scenic rivers

The National Wild and Scenic Rivers System is designated by the federal government. Designated rivers are managed by either the National Park Service, the Fish and Wildlife Service, the Bureau of Land Management, or the Forest Service. Federal regulations are concerned primarily with adverse effects on the natural, cultural, and recreational values of the Wild and Scenic Rivers. "Adverse effects include the alteration of the free-flowing nature of the river, alteration of the setting, or deterioration of water quality" (Federal Highway Administration, 1987).

Three branches of the Flathead River are designated as Wild and Scenic River systems: the North Fork, the Middle Fork (to Bad Rock), and the South Fork (above Hungry Horse Reservoir). Portions of the Missouri River, north of Lewistown, are also part of this system. If a transportation project is anticipated to have a negative impact on a Wild and Scenic River or adjacent land, the MDT must identify all possible means of mitigation.

h. Threatened and endangered species

The protection of threatened and endangered species has become a national priority. The MDT is required to avoid the habitat of threatened and endangered species whenever possible.

Threatened and Endangered Species are classified by the United States Department of Interior, Fish and Wildlife Service. There are eight endangered species and three threatened species in Montana (Fish and Wildlife Service, 1994). The known locations of these species are identified by classification in Exhibit II-28. In addition, Category 1 Candidate Species are included because their presence mandates a biological review to ensure that their habitat is not encroached upon (Federal Highway Administration, 1987). There are no proposed species in Montana and threatened and endangered species maps do not account for migratory lands or other land areas used by threatened and endangered species.

The MDT is responsible for identifying potential transportation impacts on endangered or threatened species habitat. According to the Federal

Highway Administration, state transportation departments must consult with federal agencies to determine the presence or absence of protected species. In addition, the MDT must assess the project area for other proposed and Category 1 species. In some cases, the MDT can negotiate with the Fish and Wildlife Service when a preferred alternative encroaches upon endangered or threatened species habitat. However, projects that cannot be exempted from protective laws are ineligible for federal funding (Federal Highway Administration, 1987).

Exhibit II-28
Threatened and Endangered Species in Montana, 1994

Environmental Consideration	Species	MDT District
Endangered Species	Bald Eagle	All
	Peregrine Falcon	All
	Whooping Crane	1, 2, 3, and 5
	Least Tern	4
	Black-Footed Ferret	3, 4, and 5
	Gray Wolf	All
	Pallid Sturgeon	3, 4, and 5
	White Sturgeon	4
Threatened Species	Grizzly Bear	1, 2, 3, and 5
	Piping Plover	3 and 4
	Water Howellia	1
Category 1 Candidate Species	Bull Trout	1, 2, and 3
	Mountain Plover	2, 3, 4, and 5
	Fluvial Arctic Grayling	2

Source: United States Department of Interior, Fish and Wildlife Service. 1994.

i. Historic and archeological sites

Historic and archeological sites and artifacts are important to American heritage. However, most sites are discovered or unearthed during project implementation. The discovery of a historic or archaeologically significant site often causes costly project delays that are very difficult to avoid.

Known historic and archaeologically significant areas are documented by the Montana Historical Society and the U.S. Department of Interior, Bureau of Indian Affairs. These sources may help to identify areas where concentrations of historic and archaeological sites or artifacts exist.

When a historic site is found, it is evaluated to determine its importance and eligibility for listing in the National Register of Historic Places. Eligibility is contingent upon several factors that seek to preserve actual or symbolic structures, buildings, sites, and objects that were instrumental in United States history (National Register Bulletin 16). Archeological sites are subject to essentially the same regulation as historic sites. However, unlike historic preservation, archeological objects can often be moved without causing the loss of their historic value.

j. Hazardous waste sites

Hazardous waste comprises a broad range of environmental considerations. Included in this category are abandoned mines, Superfund sites, underground storage tanks, landfills, and other locations with potentially dangerous man-made hazards. Hazardous waste sites are scattered across the state.

The location and severity of known hazardous waste sites can be identified prior to advance transportation planning and programming by coordinating with the Montana Department of State Lands, Abandoned Mines Bureau and the Montana Department of Health and Environmental Sciences (Montana Index of Environmental Permits, 1993). Additional information concerning hazardous waste can be found at the regional office of the Environmental Protection Agency, located in Helena, where Superfund site information is available.

Information derived from state and federal sources should be used during the creation and evaluation of project alternatives.

k. Visual quality and aesthetics

Preserving the visual appeal of Montana is an objective of the MDT. However, visual quality and aesthetics are difficult to accommodate at the planning level. Therefore, consideration of these factors is most common at the project level.

Because it is a qualitative measure, no data base exists concerning the aesthetic or visual qualities of the Montana transportation system. However, policies concerning billboards along Montana transportation corridors are currently under evaluation. In addition, MDT's proposed scenic byway program aims to preserve and enhance the visual quality and aesthetics of key corridors.

l. Energy

Transportation in Montana, like the rest of the nation, is energy intensive. In 1992, the state consumed 598,989,000 gallons of motor fuel, or over 700 gallons per person, 77 percent of which was comprised of gasoline. This represented a 5.5 percent increase over 1991 (Federal Highway Administration, 1992). Montana's intensive reliance on petroleum fuels is largely due to the rural development pattern of the state and the lengthy distances between destinations. In fact, only South Dakota has more rural travel characteristics than Montana. These characteristics are compounded by the tendency of Montanans to drive alone, a lack of travel alternatives to the private automobile, and the growing number of vehicle miles travelled.

For the United States as a whole, data indicate that between 1970 and 1991, energy efficiency increased for all passenger modes, except transit buses and rail transit. Transit buses became less energy efficient for a number of reasons, including a decline of ridership. As a result of Corporate Average Fuel Economy standards and rising gasoline prices during the early 1980s, automobiles in 1991 were more than 34 percent more fuel efficient than in 1970, on a per passenger-mile basis. However, highway use of petroleum increased 13.7 percent during the same time period due to increases in the number of vehicle miles traveled. Highway system improvements have reduced congestion and unnecessary speed changes so that vehicles can now operate more efficiently. The efficiency of all freight modes also improved between 1970 and 1991, when measured on a per vehicle mile basis. The amount of fuel burned per unit of freight hauled declined as a result of load-size increases and slight improvements in operating efficiency (US Department of Energy, 1994).

Energy use has a number of environmental impacts, including the release of air pollutants from fuel combustion that eventually settle into the water system. The development and distribution of petroleum fuels can also have environmental impacts caused by refinement, spills, evaporation, and others.

Overall, improved highway system efficiency that reduces roadway congestion and transportation system management that reduces stop and start traffic reduce energy consumption. The use of public transportation and other transportation demand management measures can also reduce energy consumption.

3. Transportation and Environmental Planning

TranPlan 21 identified the key long range challenges for ensuring that transportation planning supports environmental protection objectives. The ability to address these issues will vary according to their type and extent.

Ensuring that environmental impacts are minimized and addressed in a cost effective manner. There are many cases where the project development process is delayed by the procedures necessary to address environmental review and permitting requirements. This can involve additional design work and other mitigation measures. Transportation system development must comply with a number of federal and state laws; permits are required and approval from a range of regulatory agencies is necessary. The time delays inherent to securing permits and approvals from agencies having jurisdiction over major transportation projects are often compounded by a number of factors. For example, in many cases environmental concerns are identified only after project planning is largely complete, thereby mandating costly modifications to project design.

Ensuring early coordination with federal and state agencies streamlines and improves the effectiveness of the environmental protection and permitting process. At the federal level the Federal Highway Administration, the US Army Corps of Engineers, and the Environmental Protection Agency recognize that environmental protection can be most effectively ensured through early coordination and communication. This is equally applicable at the state level.

Careful review of the procedural steps to ensure that environmental considerations are identified and addressed early in the planning process could improve environmental outcomes and reduce project costs. If environmental concerns are addressed after right of way has been acquired and design work undertaken through the permitting process often the only course of action is to mitigate the existing project. Whereas a different project might have been chosen or a different solution developed if the environmental concerns and costs had been known prior to project selection and development. The proposed "Interagency

Memorandum of Understanding Establishing A Framework for Cooperation to Sustain Ecosystem, Watersheds, and Communities in Montana" is the type of approach that can ensure good early interagency communication and coordination.

Improving the environmental information available and the understanding of its implications by MDT staff. Information on environmental conditions is distributed between many different state and federal agencies. TranPlan 21 has provided an initial inventory of the environmental information and sources that are available. Enhancing access to this information and broadening the understanding in MDT of the implications of certain environmental conditions for planning and project development will more efficiently address environmental concerns.

Minimizing the impact arising from the encroachment of roadways upon streams and wetlands and from road stream crossings. Streams and wetlands are very environmentally sensitive areas. Projects that cross streams or encroach on wetlands involve considerable mitigation. Although this can often only be assessed on a project by project basis, in general it will help protect the environment and reduce project costs if encroachment and stream crossings are minimized.

Ensuring that sensitive wildlife habitat, wildlife travel corridors, and endangered species protection is addressed. Large portions of Montana's highways pass through endangered and threatened species wildlife habitat. At the project level MDT ensures that this habitat is protected and that mitigation measures are taken to preserve wildlife corridors.

Ensuring consistency with the state Nonpoint Source Management Plan. Transportation projects must be consistent with the State Nonpoint Source Management Plan to help meet Clean Water Act requirements. Consistency can be addressed at the corridor and project planning levels. Ensuring consistency would involve establishing and adhering to adequate stormwater management procedures, maintaining compliance with the State Non-point Source Management Plan and water quality standards.

Addressing vehicle emissions and particulate matter concerns. The MDT is addressing vehicle emissions and particulate matter problems by reducing its use of road sand, by increasing its fleet of sweepers, and by working with local governments to develop projects funded through the Congestion Mitigation and Air Quality Improvement Program. The MDT's role in addressing mobile source emissions in air quality non-attainment areas is guided by federal conformity regulations and the State Implementation Plan.

Communicating the limitations of MDT's mandate in the area of growth management and development regulation. There is significant concern in western Montana about the impacts of population growth and associated development on the environment. MDT has no authority to regulate this growth. The ability to delineate and limit development in environmentally sensitive areas rests with the local jurisdictions.

4. Guide to Environmental Data Sources

Exhibit II-29 on the following pages provides a guide to environmental information sources that will be required for corridor and project planning.

POLICY PAPER

**Exhibit II-29
 Environmental Considerations
 Data Sources for Planning and Project Development**

Environmental Considerations	State Agencies - Data Sources			Federal Agencies - Data Sources		
	Data Base	Agency	Contact	Data Base	Agency	Contact
1. Land Ownership						
Private						
State Lands		Department of State Lands	Land Administration Division			
U.S. Department of Agriculture - Forest Service				Forest Management Plans and Maps	National Forest Service	Forest Supervisors
Tribal - Sovereign Tribal Governments				Land Status Maps and Title Status Reports	U.S. Department of Interior - Bureau of Indian Affairs	State Headquarters or Agency Offices
National Parks					U.S. Department of Interior - National Park Service	Park Headquarters

POLICY PAPER

	State Agencies - Data Sources			Federal Agencies - Data Sources		
	Data Base	Agency	Contact	Data Base	Agency	Contact
Environmental Considerations						
Other recreation and parklands as defined in Section 4(f) of Title 23 United States Code	Parks Inventory	Department of Fish, Wildlife, and Parks	Parks Division	Surface Management Maps	U.S. Department of Interior - Bureau of Land Management, Fish and Wildlife Service, and U.S. Corps of Engineers	District Office/ Montana Office
2. Farmlands						
Prime, Unique, Statewide, and Local Importance				Important Farmlands Maps	U.S. Department of Agriculture, Soil Conservation Service	District Conservationist
3. Air Quality Attainment Status Not in attainment	Carbon Monoxide and Particulate Matter, maps	Department of Health and Environmental Sciences	Air Quality Division	Aerometric Information Retrieval Systems (Indian Reservations)	U.S. Environmental Protection Agency	Air, Toxins, and Hazardous Waste Branch

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Environmental Considerations	State Agencies - Data Sources			Federal Agencies - Data Sources		
	Data Base	Agency	Contact	Data Base	Agency	Contact
4. Water Quality						
Ground Water Sensitive Areas	Water Information System; Well Reports	State Library; Department of Natural Resources and Conservation	Water Information System Coordinator; Water Resource Division	Designated "Sole Source Aquifers"	U.S. Environmental Protection Agency	Montana Office
Surface Water Sensitive Areas Storm water run off/non degradation Classified streams	Erosion Control Permits	Water Quality Board; Department of Fish, Wildlife, and Parks	Fisheries Division	Clean Water Act - Section 403	U.S. Environmental Protection Agency	State Regulatory Office (Montana)
5. Wetlands Location	Interagency Wetland Group Ledger	Department of Fish, Wildlife, and Parks	Stream Protection Coordinator	National Wetlands Inventory	U.S. Fish and Wildlife Service	Montana Field Office
	Named Streams; 124 Stream Protection Act Permits	Department of Fish, Wildlife, and Parks	Stream Protection Coordinator	Clean Water Act Section 404 Permits	U.S. Corps of Engineers	State Regulatory Office
6. Water Body Modification (potential number of stream/river crossings)						

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Environmental Considerations	State Agencies - Data Sources			Federal Agencies - Data Sources		
	Data Base	Agency	Contact	Data Base	Agency	Contact
7. Floodplains Delineated floodplains	Floodplain maps	Department of Natural Resources and Conservation, County Planning Offices	Floodplain Office or County Planning Offices	Flood Insurance Regional Maps	Federal Emergency Management Administration	County Planning Offices
8. Wild and Scenic Rivers Recreational river location Scenic river location	State Navigable Waters	Department of State Lands	Land Office	National Wild and Scenic Rivers List	U.S. Department of Agriculture, Forest Service; U.S. Department of Interior, Bureau of Land Management	Missoula Regional Office, Billings Bureau of Land Management Office

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Environmental Considerations	State Agencies - Data Sources			Federal Agencies - Data Sources			
	Data Base	Agency	Contact	Data Base	Agency	Contact	
9. Threatened and Endangered Species	<ul style="list-style-type: none">Bald EagleGrizzly BearPiping PloverPallid SturgeonWhooping CraneLeast TernBladefooted FerretGray WolfPeregrin FalconWater Howellia (proposed)	Element Occurrence Record; Geographic Information System Maps; Montana Threatened and Endangered Species Map	State Library	Montana Natural Heritage Program; Data Manager	Current List and Map of Threatened and Endangered Species	U.S. Department of Interior Fish and Wildlife Service	Environmental Services Manager
10. Sensitive Species/Species of Special Concern		Natural Resource Information System	State Library; Department of Fish, Wildlife, and Parks	Regional Biologist		U.S. Forest Service	District Forester

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Environmental Considerations	State Agencies - Data Sources			Federal Agencies - Data Sources		
	Data Base	Agency	Contact	Data Base	Agency	Contact
11. Historic, Archaeologically and Culturally Sensitive Areas						
Tribal Ownership, State Registered for Historic Preservation, Significant Historic Sites, and MDT Historic Bridges	Cultural Resource Annotated Bibliographic System; Programmatic Memorandum of Agreements; Historic Roads and Bridges; Historic Irrigation Systems	Montana Historical Society; State Historic Preservation Office	Archeologist	National Register of Historic Places	U.S. Department of Interior, Bureau of Indian Affairs; Advisory Council on Historic Preservation	Agency Archeologist; Western Division of Project Review
12. Hazardous Waste						
Locations with mining activity history	Abandoned Mines	Department of State Lands	Reclamation Division		U.S. Environmental Protection Agency	Superfund Branch
Known superfund sites	List of Sites	Department of Health and Environmental Sciences	Environmental Remediation Division	Superfund Site List	U.S. Environmental Protection Agency	Superfund Branch

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Environmental Considerations	State Agencies - Data Sources			Federal Agencies - Data Sources		
	Data Base	Agency	Contact	Data Base	Agency	Contact
Underground storage tanks	Leaking Underground Storage Tank List	Department of Health and Environmental Sciences	Underground Storage Tank Program	Underground Storage Tank List	U.S. Environmental Protection Agency	Air, Toxics, and Hazardous Waste Branch
Bridges with lead paint	Maintenance Reports	Department of Transportation	Bridge Engineer			
Landfills	Landfill Licenses and Classes	Department of Health and Environmental Sciences	Solid and Hazardous Waste Bureau			

C. Social Considerations

The values and priorities of Montanans regarding the future of the transportation system represent many of the social considerations addressed by TranPlan 21. Their values and priorities were determined through public meetings that identified key transportation planning issues and a statewide telephone survey. The results are documented in Volume IV Stakeholder and Citizen Issues and Priorities. They are presented in a summarized form in this section.

1. Stakeholder issues, and priorities

The values and priorities of transportation interests and Tribal Governments across Montana were determined through a series of open houses and focus groups across the state. A total of 259 people signed in as participants. Others expressed their issues and values in writing or by telephone.

The issue identification showed that many Montanans share similar concerns about the current transportation system and a largely common vision for the future.

Following are the most important general and modal issues identified through public meetings. The concerns expressed represent the transportation values of those meeting attendees and do not necessarily represent the views of all Montanans, nor those of the MDT.

a. General issues

The following provides an overview of the overall concerns and values of transportation stakeholders.

- Desire for a multimodal transportation system. Participants recognized the importance of moving to a multimodal transportation system. This is true in particular in the urbanized areas of the state. While most participants realized that the automobile will continue to be the most important means of transportation, they also thought that it is time to start providing alternatives where it is feasible and to make provisions that will allow for the use of these alternatives in the future.
- Desire for a broader role for MDT. Participants seemed to envision a broader role for MDT than it has had in the past. They felt that a shift from an agency that is mostly concerned with roadway construction activities to one that helps better manage the overall transportation system is needed. There is a recognition that many transportation problems are not local but regional or

corridor level, involving a number of local jurisdictions. Therefore, MDT is the only agency able to address the problems and should have a leadership role. Specific examples that indicate a broader role are: facilitating land use planning at the local and regional level, providing information on public transportation services to both users and providers, supporting local freight needs, and providing design standards conducive to bicycles, pedestrians and transit for use by local governments.

- Concern about the overall relationship between transportation and the quality of life. Many participants asked that MDT make sure that transportation decisions are not made in a vacuum but consider their impact on communities, the quality of life of Montanans, the economy, and the environment. They called for MDT to protect the scenic beauty of the State's major travel corridors, the character of its towns and cities, wildlife, and sensitive areas.
- Importance of safe transportation facilities. The safety of highway users, bicyclists and pedestrians is a very important issue for a large majority of participants. MDT should continue to make safety a priority for all transportation users.
- Recognition of the need for coordinated land use and transportation planning. Generally, participants at the open houses were conscious of the close relationship between land use and transportation. There is a recognition that MDT affects land use decisions by providing transportation facilities and through access controls to these facilities. Roles suggested for the State include: supporting the efforts of local governments through the provision of appropriate facilities and access controls, providing information to local governments, and coordinating efforts for land use planning on a regional basis.

b. Highway issues

Following describes the major highway issues.

- The system is basically complete - with a few exceptions, therefore the focus should be on preservation and maintenance. Most participants at the public meetings felt that Montana has an excellent highway system given its size, population density, and resources. They thought the highway system in the state is basically complete and that MDT should focus on preservation and maintenance.

There was agreement, however, that specific components of the system need capacity improvements. Highway 93 between Kalispell and Missoula, for example, was mentioned at most meetings. The need to pave the gravel road between Terry and Brockway was raised in Miles City. There was discussion of improvements between Great Falls and Billings in both locations but no consensus on the need. Most open houses identified problem intersections or connections within particular urban areas.

- Need for access management. Many participants realized the need for better access management and control on major facilities in certain corridors. They cautioned, however, against a statewide policy that does not take regional or corridor differences into consideration. Participants felt that MDT should work with local government to determine the most appropriate approaches for individual corridors and facilities.
- Prevention of billboard proliferation. There was a substantial amount of concern about billboard proliferation especially in scenic corridors. There is a belief that there has been an increase in the number and size of billboards and participants wanted MDT to address this problem.
- Acknowledgement of the needs of tourism. An increasing reliance on tourism as a major industry in Montana was predicted by many participants. They felt that it is MDT's responsibility to consider this in planning efforts. Issues raised affecting tourism included:
 - Negative impacts from billboards.
 - Lack of rest facilities (People would like to see them within communities rather than outside city limits along the freeway).
 - Signage for attractions and points of interest.
 - Seasonal congestion and safety issues along major tourist routes, especially between Glacier and Yellowstone Parks.
 - Information on location of dump stations for recreational vehicles.
- Desire for a consistent approach to improvements. Some participants felt that the decision process for financing improvements to the system is not consistent. They asked MDT to review its approach to making these decisions and ensure consistency across the State.

c. Public transportation issues

- Recognition of the social role of public transportation. Many participants commented on the continuing increase in the transit-dependent elderly population in the state. In particular, there is an aging population in the rural and small urban areas, and at the same time, a decline in local medical services and shopping, among others. This increases the need for transportation to emerging regional centers that provide these services. Many participants felt strongly that these essential transportation services should be provided where feasible.
- Concern about lack of coordination between systems. There was substantial concern about a lack of coordination between the existing local, regional, and intercity systems. Participants see a role for MDT in facilitating coordination and greater efficiency. This could include working to remove existing regulatory barriers to efficient regional services and providing schedule information to the public for all providers.
- Desire to provide transit-friendly infrastructure. Participants in the western cities felt that there is a need to meet future transportation demand through increases in transit use. They see a role for MDT and local jurisdictions to provide land use and design guidelines that can facilitate transit use. However, there was strong skepticism about the cost-effectiveness of fixed route systems for moving people.
- Need to promote public transportation. Some participants would like to increase public awareness of the environmental and energy benefits of public transportation and asked for more promotion.
- Concern about the condition of terminals, the lack of intermodal connections and facilities. There was some concern about the condition of terminals, especially for intercity bus passengers. Participants considered the development of intermodal shared use terminals desirable. Some participants were concerned about the current lack of access to rail and air by public transportation. They felt that the different modes of public transportation should be connected.
- Relatively little concern about air transportation outside of Northeast Montana. While a small number of participants were concerned about recent losses of commercial air service, the majority of participants did not raise the level of air transportation service as a critical issue. The participants at the Tribal Government meetings from the Glasgow, Wolf Point, and the Havre areas

were concerned about any potential loss of subsidized service and the high cost of this service.

d. Freight rail issues

- Concern about continued loss of branch rail lines. The continued loss of freight rail lines is a major concern across the State. Participants felt that in particular long-haul bulk freight belongs on rail rather than trucks. There was agreement that MDT has a responsibility to work with rail operators to keep existing lines viable where possible or at least to ensure that existing public right-of-way is protected.
- Desire to move freight from truck to rail. Many participants expressed concern about the size and speed of truck and trailer combinations they encounter on the freeway and their impact on pavement conditions. In many corridors, they saw a conflict between truck and automobile uses. Others pointed to the energy efficiencies and low environmental impacts of rail. All asked MDT to explore ways to facilitate movement of goods by rail rather than truck for these reasons. However, participants recognized that truck movements are the only viable option in many parts of the State.

e. Pedestrian and bicycle issues

- Strong support for incorporating pedestrian and bicycle facilities within the system. There was a high level of support for making bicycle and pedestrian facilities a consistent component of the state's future transportation system. The priorities expressed were in urban areas and in scenic corridors with high volumes of tourist traffic. Participants want bicycle facilities incorporated into planning for rehabilitation and new projects. There was a recognition that care should be taken to ensure that consideration of bicycle needs in rural areas reflects the low population density and large geographical areas in Montana.
- Need for agreed approach to design standards. The participants see a role for MDT to help local governments develop design standards that are conducive to pedestrian and bicycle use in the growing urban areas.
- Concern that safety is improved. Participants were concerned about the safety of bicyclists and pedestrians. They asked MDT to reconsider some of its design standards, for example the use of rumble strips on state highways, with their safety in mind. Maintenance practices should not adversely impact use of pedestrian and bicycle facilities.

2. Tribal Government issues

This section provides an overview of the key issues identified by the different tribal governments.

- **Importance of Respecting Tribal Sovereignty**

The tribal governments emphasized very strongly that they are sovereign governments and that this should be reflected in the planning process. Furthermore, this needs to be reflected in MDT's continuous planning process and Statewide Transportation Improvement Program (STIP) development. This is particularly significant given the size of the land area and the number of state facilities crossing the reservations.

- **Need for Improved Interjurisdictional Collaboration**

In general, the Tribes recognize that there has not been a particularly good working relationship with MDT. However, the planning process and the issue identification work are viewed as a good initiative. They believe that this needs to be translated into meaningful involvement, by developing a plan which reflects tribal concerns in the management of the transportation system.

In many locations, state owned routes pass through reservation lands. The Tribes would like to be involved in a collaborative process for planning, managing, and funding for these routes. For example, the Confederated Salish and Kootenai Tribes are concerned about corridor management and safety issues which they want addressed if tribal right-of-way is to be granted for improvements to Highway 93.

- **Need To Address Indian Contract Preferences**

A number of the Tribes expressed their concern about Indian contract preferences. The Blackfeet Tribe expressed their opinion that it is not possible to establish a collaborative framework for planning and programming until the outstanding disagreements with the MDT concerning Tribal Employment Rights Office (TERO) issues are resolved. Their position is that no projects will be built on the reservation until agreements are reached.

3. Telephone survey results

In November, 1994, a telephone survey of Montana residents was performed to determine the opinion of Montana residents about the current state of transportation in the state, and to obtain opinions about how to prioritize future MDT actions. The survey involved a random digit dialing sampling technique to generate the sample. In total 710 interviews were undertaken.

a. Satisfaction with the transportation system

Survey respondents were asked to rate their level of satisfaction with twelve different components of transportation in Montana. In making these ratings, the respondents were asked to use a scale of one to ten where one was very unsatisfied and ten was very satisfied. Exhibit II-30 summarizes the results of these ratings.

Respondents were mainly satisfied with the transportation system, although bicycling facilities, Amtrak, between city buses, and city streets fell onto the unsatisfied side of the scale.

Exhibit II-30
Satisfaction with Montana Transportation System Components

Transportation System Component	Number of Respondents	Average Rating
Interstate Highways	694	7.40
Shipping Freight	585	7.13
Out of State Air	577	6.69
Special Transportation	386	6.14
In State Air	393	5.72
Local Transit	254	5.57
Pedestrian Walkways	623	5.39
Other Highways	678	5.23
City Streets	700	4.87
Between City Buses	266	4.81
Amtrak	278	4.78
Bicycling Facilities	465	4.61
Overall Transportation System	700	6.20

Source: TranPlan 21, Telephone Survey. November, 1994.

b. Perceived problems

The respondents were presented with a list of 23 possible problem areas with the transportation system and were asked how serious a problem each area was. In their rating respondents were asked whether the item was not a problem, a small problem, a moderate problem, or a serious problem. These were then scaled 1 to 4, where 1 is not a problem and 4 is a serious problem. The average score for each potential problem area is listed in Exhibit II-31 below.

Exhibit II-31

Assessment of Transportation Problem Areas

Transportation Area	Not a Problem	Small Problem	Moderate Problem	Serious Problem	Number of Respondents
Passenger Rail Availability	17.8	12.9	21.9	47.3	488
Traffic from Growth	16.7	11.8	31.0	40.5	654
Bus Depot Condition	16.4	16.1	25.6	41.9	360
Other Road Condition	8.0	19.7	44.8	27.5	687
Low Transit Use	17.1	18.5	34.5	29.8	362
Rural Air Service Availability	19.8	17.3	28.6	34.4	434
Bicycle Facilities	20.5	18.0	27.8	33.7	561
Traffic Congestion	26.4	13.3	28.4	31.8	682
Transportation Connections	23.8	19.0	33.5	23.6	483
Single Occupant Vehicles	31.9	13.1	29.8	25.2	634
Intercity Bus Availability	28.8	18.6	29.1	23.5	371
Rail Freight Service	31.7	17.1	24.8	26.4	375
Local Transit Availability	32.4	16.4	25.7	25.5	377
Transit Scheduling	35.7	14.4	29.7	20.1	333
Pedestrian Walkways	32.3	20.8	27.7	19.1	638
Support of Economic Development	28.4	23.1	35.3	13.2	592
Air Service Availability	32.8	19.0	33.9	14.3	537
Air Quality	34.3	21.2	27.4	17.1	645
Transportation Safety	35.1	19.0	33.9	12.0	643
On Road Freight	40.1	17.8	28.7	13.4	596
Construction Environmental Impact	39.6	21.1	27.1	12.2	641
Interstate Condition	38.9	25.3	30.0	5.8	684
Highway Approaches	49.0	19.0	21.6	10.4	663

Source: TranPlan 21 Telephone Survey. November, 1994.

c. Priorities for action

The respondents were presented with a list of 25 potential actions that MDT could take to address the different problem areas. For each action, the respondents were asked whether they thought the action should have no priority, low priority, middle priority, or high priority. The priorities assigned are presented in Exhibit II-32.

Exhibit II-32

Assessment of Priority of Department of Transportation Action

Priority	No Priority	Low Priority	Middle Priority	High Priority	Number of Respondents
Improve Other Roads	1.9	9.4	31.7	57.0	679
Improve Transportation Safety	5.5	10.0	26.9	57.7	659
Increase Capacity	5.5	13.3	35.9	45.4	641
Pedestrian Friendly Improvements	6.4	15.2	32.1	46.4	660
Preserve Rail Branches	5.7	20.3	31.7	42.3	558
Promote Rail Service Use	6.3	21.8	31.6	40.4	560
Ensure Economic Development	7.3	17.0	40.1	35.6	648
Ensure Adequate Bicycle	8.3	18.1	36.4	37.2	626
Change Travel Modes	9.7	20.8	29.2	40.3	660
Promote Transit	8.8	28.2	34.0	36.4	536
Improve Interstates	6.4	23.9	37.5	32.2	677
Minimize Environmental Impacts of Highway Construction and Maintenance	10.2	20.8	34.9	34.1	654
Retain Railroad Rights of Way	8.8	28.2	32.2	30.7	602
Improve Bus Depots	11.8	26.2	26.6	35.4	458
Support Intercity Bus	8.5	25.4	39.6	26.5	520
Increase Carpooling	13.6	22.9	29.9	33.5	668
Promote Intercity Bus	9.8	26.5	36.6	27.1	528
Reduce Air Impact	14.0	26.0	33.3	26.7	649
Improve Road Freight	11.3	27.1	38.7	22.9	608
Reduce Congestion	10.5	17.0	23.8	48.7	451
Increase Transit Flexibility	11.8	27.5	38.6	22.6	451
Promote Available Air Service	10.8	31.7	36.7	20.9	575
Ensure Rural Air Service	13.1	29.8	35.1	22.0	550
Reg Highway Approach	16.3	28.7	36.2	18.9	652
Reduce Private Vehicle	27.4	35.1	27.1	10.4	656

Source: TranPlan 21 Telephone Survey. November, 1994.

D. References

1. Economic and Demographic Consideration

American Trucking Association Foundation, "Trucking in the USA", 1992.

Area Development, Site Selection, "Corporate Executives Rate Site Selection Factors", Tom Bergeron, Editor, December 1991.

Business America, "Key Provisions of the North American Free Trade Agreement", Anne M. Driscoll, US Department of Commerce, Office of Mexico, October 19, 1992.

Bureau of Labor Statistics, Office of Economic Projections, Outlook: 1990-2005, "Industry output and job growth continues slow into next century", Max L. Carey and James C. Franklin, November 1991.

Bureau of Labor Statistics, Office of Economic Projections, Outlook: 1990-2005, "The U.S. economy into the 21st century", Norman C. Saunders, November 1991.

Daily Journal of Commerce, Seattle, Washington, "Commuter homes rise in Montana Valley", June 27, 1994.

Federal Reserve Bank of San Francisco, "Western Economic Developments", September 1993.

First Interstate Bank, "Pacific Northwest Economic Indicators", Vol. 3, No. 3, June/July 1994.

Montana Department of Agriculture, Montana Agricultural Statistics Service, Volume XXX, October 1993.

Montana Department of Agriculture, Montana Agricultural Statistics Service, "Wheat & Barley Movement", Released: February 10, 1994.

Montana Department of Agriculture, Montana Agricultural Statistics Service, "Wheat Utilization", Released: February 14, 1994.

Montana Department of Transportation, "Transportation Aspects of Montana's Demographic and Economic Trends", December 14, 1993.

The University of Montana, Bureau of Business and Economic Research, *Montana Business Quarterly*, Volume 32, Number 1, Spring 1994.

The University of Montana, Bureau of Business and Economic Research, *Montana Business Quarterly*, Volume 31, Number 1, Spring 1993.

The University of Montana, Bureau of Business and Economic Research, *Montana Business Quarterly*, "The Rocky Mountain West Region in Transition", Emily S. Rosenberg, Winter 1992.

The University of Montana, Bureau of Business and Economic Research, *Montana Business Quarterly*, "The Region's Changing Economic Landscape", Larry D. Swanson, Autumn 1992.

The University of Montana, Bureau of Business and Economic Research, *Montana Business Quarterly*, "Regional Resource Industry Dependency", Larry D. Swanson, Spring 1992.

The University of Montana, Bureau of Business and Economic Research, *Montana Business Quarterly*, "The Shifting Place of Trade in Montana", Larry D. Swanson, Summer 1991.

The University of Montana, Bureau of Business and Economic Research, *Montana Business Quarterly*, "High Tech Industry in Montana", Larry D. Swanson, Winter 1990.

The University of Montana, Bureau of Business and Economic Research, *Outlook*, Winter 1994.

The University of Montana, Institute for Tourism and Recreation Research, "The 1994 Outlook for Travel and Tourism in Montana".

The University of Montana, Institute for Tourism and Recreation Research, "The 1993 Outlook for Travel and Tourism in Montana".

The University of Montana, Institute for Tourism and Recreation Research, "The 1992 Outlook for Travel and Tourism in Montana".

The University of Montana, Institute for Tourism and Recreation Research, "Montana Travel and Tourism Statistics Source book, 1980 - 1992".

The University of Montana, Montana Forest and Conservation Experiment Station School of Forestry, "An Assessment of Montana's Timber Situation", Miscellaneous Publication 53, September 1993.

United States Department of Agriculture, Economic Research Service, "Rural Conditions and Trends", Fall 1993, Vol. 4, No. 3.

United States Department of Agriculture, Economic Research Service, "Rural Conditions and Trends", Summer 1993, Vol. 4, No. 2.

United States Department of Commerce, Economics and Statistics Administration, Bureau of the Census, "Population Projections for States, by Age, Sex, Race, and Hispanic Origin: 1993-2020", Paul R. Campbell, Issued March 1994.

United States Department of Commerce, International Trade Administration, "U.S. Industrial Outlook 1993".

Washington State University and Washington State Department of Transportation, Eastern Washington Intermodal Transportation Study, "Linking Transportation System Improvements to New Business Development in Eastern Washington", William R. Gillis, Ph.D., Report Number 1, February 1994.

2. Environmental Considerations

Checklist Environmental Assessment. Montana Department of State Lands, Central Land Office. (Helena, MT).

Draft Environmental Impact Statement, F-5-1(9)6, U.S. Highway 93 Evaro-Polson, Missoula and Lake Counties, Montana. U.S. Department of Transportation, Federal Highway Administration and State of Montana, Department of Transportation. (Helena, MT: May 23, 1994).

Guidance for Preparing and Processing Environmental and Section 4(F) Documents. United States Department of Transportation, Federal Highway Administration. (Washington, DC: October 30, 1987).

Memorandum of Understanding: Establishing a Framework for Cooperating to Sustain Ecosystems, Watersheds, and Communities in Montana. Montana Interagency Coordinating Group. (8/30/94 Draft).

Montana Air Quality Division. Verbal communication with staff. (Helena, MT: September, 1994).

Montana Index of Environmental Permits. Montana State Legislature, Montana Environmental Quality Council. (Helena, MT: December, 1993).

Montana Department of Natural Resources and Conservation, Floodplain Office. Verbal communication with staff. (Helena, MT: September, 1994).

Montana Department of State Lands, Central Land Office. Verbal communication with staff.

United States Department of Interior, Fish and Wildlife Service-Ecological Services. (Helena, MT: November, 1993).

National Register Bulletin 16, Guidelines for Completing National Register of Historic Places Forms. United States Department of Interior, National Park Service. (Washington, DC: 1991).

Transportation Energy Book: Edition 14. United States Department of Energy. (Washington, DC: May, 1994).

United States Department of Agriculture, Soil Conservation Service. Verbal communication with staff. (Bozeman, MT: September, 1994).

United States Department of Interior, Bureau of Indian Affairs. Verbal communication with staff. (Billings, MT: September, 1994).

United States Department of Interior, Fish and Wildlife Service. Verbal communication with staff. (Helena, MT: September, 1994).

3. Social Considerations

TranPlan 21 Telephone Survey. November, 1994.

III. TRANSPORTATION SYSTEM DESIGNATION



This section designates the elements of Montana's statewide transportation system that will be subject to state-level planning. These elements are the transportation facilities and services that are addressed by TranPlan 21 and will be the focus for the continuous statewide planning process. Transportation facilities and services not included are important to Montana but are more appropriately addressed as part of other state and local planning.

A. INTRODUCTION

TranPlan 21 has initiated a new approach to planning and managing Montana's transportation system. This approach involves state-level planning extending beyond the facilities that are constructed and maintained by the state, to include elements of the transportation system which are owned and operated by other units of government and the private sector. The success of this type of planning requires close collaboration and partnership with the other jurisdictions and entities providing transportation facilities and services in Montana. TranPlan 21 represents the first steps in this collaboration, establishing a new role for the Montana Department of Transportation (MDT) as the steward of Montana's multimodal system.

The rationale and criteria used to designate the elements of Montana's statewide multimodal transportation are presented in the following sections:

- The state's role in transportation.
- Multimodal system designation.
- System elements.

B. THE STATE'S ROLE IN TRANSPORTATION

TranPlan 21, in implementing the multimodal planning requirements in the Intermodal Surface Transportation Efficiency Act (ISTEA), is determining the most effective role for the state in planning, managing, and operating transportation facilities and services. This involves determining the MDT's role, if any, in many areas of transportation which traditionally it has not been heavily involved in.

1. The State's Current Role in Transportation

The state's role in transportation is exercised through the MDT. Historically, the state's role has been mode specific and involved primarily planning, maintaining, and improving highway facilities on the state's funding systems. This has successfully provided the basis for the development of Montana's highway system.

Planning and funding mechanisms at the state-level have been focused mainly on the highway facilities which the state is responsible for. For the public transportation, freight rail, and air transportation modes, the state's role has been restricted to managing federal funding programs which affect a limited portion of facilities and modes.

Montana's current state-level involvement in transportation has the following characteristics:

- Serving statewide transportation demands by meeting intercity, interstate, and international transportation needs through the highway system.
- Ensuring intrastate connectivity through a highway system that connects rural areas and small communities to regional service centers.
- Providing support for minimum levels of service for facilities and services that serve regional intrastate needs in rural areas.
- Working with urban areas and metropolitan planning organizations to plan for and address mobility needs in Montana's urban areas.

TranPlan 21 builds on these existing roles, but approaches the overall transportation system in terms of the functional role each mode plays in moving passengers and freight, irrespective of who is responsible for the facility or who provides the service.

2. The State's Multimodal Role

TranPlan 21 defines the state's multimodal role based upon the facilities and services that perform a statewide function and, therefore, should be included in the statewide transportation plan and addressed by the continuous statewide planning process.

Montana's transportation system serves a variety of different demands and trip purposes. Some transportation elements allow movement on a local or regional

scale while others serve longer-distance intrastate, interstate, and international traffic. Most facilities serve a combination of these different types of movement. The geographic scale of trips using different transportation facilities defines their functional role. Functional role refers to whether the facility or service is serving a local, regional, or statewide function. Facilities and services that perform a statewide and/or a regional function are most appropriately the focus of statewide planning.

In general, for facilities or services with a statewide and/or regional function, MDT will plan, manage, and operate or will provide assistance and guidance to maximize the ability of the facility or service to meet the performance goals.

C. MULTIMODAL SYSTEM DESIGNATION

Montana's multimodal system is designated based upon the functional role each element of the transportation system provides and the need to address the different planning factors included in the ISTEA. A series of criteria were established which when applied provide an inventory of Montana's multimodal transportation system.

When designating the system, it is important to emphasize that the fundamental function of the transportation system is to provide for the movement of people and goods. In this capacity, Montana's transportation system serves both as an infrastructure for the economy and as means to achieve social, environmental, economic development, and other goals. The designated transportation system reflects these considerations.

1. Definition of Statewide Function and State Responsibility

System designation provides a definition of which corridors, facilities, services, and modes currently perform a statewide function and will be subject to continuous planning. The designation also reflects the economic development, social, and environmental priorities in Montana. The starting point for designating the system is clearly defining the corridors, facilities, services, and modes that serve statewide functions and should therefore be addressed by the statewide plan.

The following describes the approach taken to identifying statewide functions and state level responsibility:

International and Interstate Function. This is defined as facilities and services used primarily for travel between Montana origins/destinations and other states, Canada, and overseas points. A special case of interstate or international movement is that where Montana serves as a "bridge" for traffic not having an in-state origin or destination.

Intercity Function. These are facilities and services that have a statewide function because they allow travel between Montana's urban areas. Intercity travel functions are performed by many elements of the transportation system that also serve international and interstate functions.

Intrastate and Regional Functions. These are facilities and services that have regional functions because they support travel from Montana's different regions to regional service centers and connections to facilities and services providing international, interstate, and intercity functions. These types of services vary greatly in geographic scale and could include air service from Wolf Point to Billings, and public transportation services from Anaconda to Butte.

2. Addressing ISTEA Planning Factors

ISTEA specifies certain elements of the transportation system that must be considered in TranPlan 21. These are:

- Strategies for incorporating bicycle transportation facilities and pedestrian walkways in projects where appropriate through out the state.
- International border crossings and access to ports, airports, intermodal transportation facilities, major freight distribution routes, national parks, recreation and scenic areas, monuments and historic sites, and military installations.
- Transportation needs of areas outside metropolitan areas.
- Recreational travel and tourism.
- Connectivity between Metropolitan Planning Organizations (MPOs) within and outside Montana.
- Methods to expand and enhance transit services and to increase their use.
- Movement of commercial motor vehicles.

The approach to defining statewide function outlined in the preceding section addresses these planning considerations in designating the statewide system. This is because the system identified by this approach includes major traffic generators and attractors regardless of their nature. Moreover, this approach addresses all modes.

3. System Designation Criteria

System designation criteria and threshold measures of the scale of activity are used to determine which elements of the transportation system serve a statewide function. The approach taken is to consider the corridors, passenger transportation services, transfer facilities, and connectors that together provide an integrated transportation system.

- Corridors are defined as the broad routes or rights-of-way through which the various modes provide transportation services.
- Transfer facilities are individual terminals or intermodal transfer points.
- Passenger transportation services are the services provided by private, non-profit, and public sector transportation providers.
- Connectors are the links or facilities which connect the transfer facilities to the corridors and ensure an integrated statewide system.

Criteria and thresholds for defining statewide function for each of these elements of the transportation system are summarized in Exhibit III-1, on the following pages.

Exhibit III-1: Montana's Multimodal Transportation System Components and Designation Criteria

CORRIDORS	
Modal Components	Criteria
Multimodal Corridor	Corridors served by more than one mode
Highway Corridor	All interstate; All principal arterial (rural and urban); Rural minor arterial (rural and urban); Rural major collector (on state secondary system); Urban collector (on state urban system)
Highway Freight Corridors	All highway corridors with truck average daily traffic (ADT) greater than 500
Freight Rail Corridor	All main lines and secondary main lines

Passenger Rail Corridor	All lines with passenger rail service
Pipeline Corridor	Interstate and intrastate trunk pipelines
Bicycle Corridors	Most important designated urban area bicycle routes (Identified in MPO and urban area plans); Rural touring and recreational routes with greatest potential use
PASSENGER TRANSPORTATION SERVICES	
Modal Components	Criteria
Intercity Bus	All interstate, intrastate, and intercity bus routes
Local Urban Transit System	All fixed route transit system (Section 9) service areas
Rural Transit Systems (Intrastate and Rural Fixed Route Operators)	All fixed route rural transit system service areas (Section 18)
Demand Responsive Transit System	All demand responsive service areas (Service must be available to public)
Air Transportation	All scheduled commercial service routes
Carpools and Vanpool Programs	All programs with participation over 50 persons per day
TRANSFER FACILITIES	
Modal Components	Criteria
Ports of Entry	All border crossings on designated highway corridors
Freight Rail Stations	All freight stations shipping over 1,000 car loads per year (total inbound and outbound)
Passenger Rail Stations	All Amtrak stations
Airports	All airports with scheduled commercial service General aviation airports greater than 8,000 operations (landings and take-offs)
Intercity Bus	All intercity, intrastate bus depots and intermodal terminals
Transit Facilities	Transit centers
Intermodal freight transfer facilities	All ports Freight rail stations with TOFC/COFC facilities

CONNECTORS	
Modal Components	Criteria
Highway	Rural major and minor collectors connecting designated facilities to designated corridors (off the state systems) Urban minor arterials and urban collectors connecting designated facilities to designated corridors (off the state systems)
Freight Rail	All branch lines

Applying these criteria generates an inventory of the individual elements of Montana's statewide system. A final criterion involves ensuring that the transportation facilities specified by ISTEA are considered.

The criteria listed in Exhibit III-1 were applied to define the statewide system that is analyzed as part of TranPlan 21. The different components are included in a series of maps in Volume I, TranPlan 21 Overview. These maps are a working inventory of the designated statewide multimodal transportation system. The statewide multimodal transportation system includes a subset of the transportation facilities included in the ISTEA management systems.

The statewide function demonstrated by each of the criteria in Exhibit III-1 are outlined below for corridors, passenger transportation services transfer facilities, and connectors:

D. CORRIDORS

1. Multimodal Corridor Criteria

A key policy and technical task for TranPlan 21 is defining what multimodalism means for Montana. In simplest terms there are two dimensions to multimodalism in Montana.

- Firstly, the availability of more than one mode for making a particular trip and,

- Secondly, the extent to which there are competitive choices among the different modes serving particular corridors or routes.

The availability of more than one mode ensures modal balance. For passenger travel, this ensures basic mobility for passengers without access to an automobile and for travelers who need air service. In the case of freight mobility, this ensures that rail service is available for the shipment of bulk commodities long distances. This aspect of Montana's multimodal system is determined by inventorying all corridors served by more than one mode.

Competition between modes is a distinguishing characteristic of multimodalism. This occurs where the markets, or demand, for modes overlap. For example, transit services in very large urban areas that meet journey-to-work travel demands are competing with the automobile for passengers and not just meeting the needs of those without cars.

In Montana there is only a limited level of non-automobile intercity and intracity passenger transportation services. There is little, if any, competition between the modes. Although many corridors are served to some degree by more than one mode, the modes often serve entirely different markets.

TranPlan 21 identifies the following criteria for defining multimodalism for Montana:

- **Corridors served by more than one passenger transportation mode.**

These corridors are multimodal in the limited sense that alternatives to the automobile are available. The corridors include all the passenger rail and the intercity bus service routes shown on the passenger transportation system map as well as city-pairs within Montana serve by scheduled air transportation. These corridors are only multimodal in that they are served by non-automobile modes of transportation.

- **Corridors in which there will be the greatest potential for multimodal passenger transportation solutions.**

These will be the corridors with the greatest current and forecast passenger travel. These corridors have the greatest potential for competition between the single occupancy vehicle and other travel options. Currently, while there is some level of public transportation service available to most Montanans, there is little competition between modes. Although many corridors are served to some degree by more than one mode, the modes serve almost entirely different travel markets. While we

do not have corridor level information from which to compare the numbers of trips by mode, it can be concluded from data quantifying the use of each mode that the automobile accounts for almost all passenger trips in the corridors served by more than one mode.

The travel demand forecasts prepared for TranPlan 21 estimate future traffic in the corridors and hence provide a basis for indicating the corridors that will have the greatest potential for multimodal solutions. These are the corridors with the highest forecast intercity traffic volumes.

- **Corridors in which freight can be shipped by rail and highways.**

There are a number of corridors in which both rail and highway modes are available. In a limited sense these are multimodal corridors. However, TranPlan 21 has not identified corridors in which rail and highway modes compete for freight shipments.

The availability of both modes is a key feature of a multimodal freight system. This reflects the policy goal of preserving the existing rail system and recognizing the economic benefits to Montana from the availability of different modes for shipping freight. It is important to recognize that the freight market is diverse. It is the heavier bulk commodities that are shipped by rail longer distances whereas the motor carrier industry in Montana hauls commodities over shorter distances and is used to ship divisible loads, products, and other items.

The intermodal freight map shows where there are parallel highway and rail corridors.

2. Highway Corridor Criteria

Interstate, principal arterial, rural minor arterial and major collector

Montana's functional reclassification categorizes highways according to the function they perform, which establishes the starting point for designating highway corridors. The higher the classification the greater the "statewide function". The following describes the statewide functions (interstate, intrastate, and regional) that are performed by each functionally classified level included in the statewide system.

Interstate and Principal Arterials (Urban and Rural)

These highways all perform a statewide function because they meet one or more of the following criteria:

- Serve corridor movements with trip lengths and traffic volumes sufficient to demonstrate interstate and statewide functions.
- Serve urban areas with populations of 50,000 and greater and a large majority of those with populations over 25,000.
- Provide an integrated network without stub connections.

Rural and Urban Minor Arterials, Rural Major Collectors (on state secondary system), and Urban Collectors (on state urban system)

These highways all perform a statewide function because they meet one or more of the following criteria:

- Provide interstate and intercounty service by linking cities and larger towns.
- Link travel generators not served by higher classification highways to travel corridors.

County Roads and City Streets

The performance of county roads and city streets taken as a whole are of concern to the State. However, TranPlan 21 does not include county roads and city streets at the corridor level. TranPlan 21 is concerned with the role these roads play in the efficient functioning of an integrated statewide system. In the major urban areas these are addressed through the federally required MPO long-range plans. TranPlan 21 will coordinate with the long-range planning being undertaken by the MPOs. In other urban areas, MDT will need to coordinate with local decision-making to ensure that it reflects the statewide function of these facilities.

Roadways of lower functional classification are not considered as corridors performing a statewide function. They are only to be included in the statewide multimodal system when they connect designated facilities to highway or rail corridors.

3. Freight Rail Corridor Criteria

All Main Lines and Secondary Main Lines (Class I and II main lines)

The criteria recommended for identifying freight rail corridors with a statewide function are based on the approach used in the Montana State Rail Plan¹. This includes all "lines important from a national perspective, which preserve and improve service to 'rail dependent' industries and major rail-using communities".

Class I and II main lines are corridors that serve interstate and international functions.

4. Passenger Rail Corridor Criterion

All lines currently used for passenger service

This criterion includes all rail lines currently used for passenger rail in Montana. Passenger rail service in Montana performs both an interstate and intrastate function.

5. Pipeline Corridor Criteria

Interstate and intrastate trunk pipelines

These criteria include all interstate and intrastate trunk pipelines. These corridors are included because pipelines are a mode of freight transportation. Interstate pipelines serve international, interstate, and intrastate functions. They deliver petroleum and natural gas.

6. Bicycle Corridor Criteria

Most significant urban area bicycle routes

Bicycle corridors do not perform a statewide function in terms of the travel demand they accommodate. However, in urban areas they provide an alternative mode and contribute to many communities' quality of life goals. In addition, ISTEA places heavy emphasis upon including bicycle facilities as part of statewide planning. The MPOs are currently preparing bicycle elements to their long-range plans. This criterion would include the most functionally significant bicycle routes designated by MPO and urban area plans.

¹ Montana Department of Transportation, 1993 Montana State Rail Plan Update.

Rural touring and recreational routes with greatest potential use

Montana has well defined tourism and tourist related economic development goals. Rural touring and recreational routes with the largest current and greatest potential future use will serve as a criterion for rural area bicycle corridor designation. These routes will need to be established in coordination with bicycle users. There is currently no data from which to identify non-urban bicycle corridors. This criterion will need to be refined to establish an analytical basis for corridor designation.

E. PASSENGER TRANSPORTATION SERVICES

Scheduled passenger transportation services constitute a key element of Montana's transportation system. These services are provided using the transportation infrastructure that provides a statewide function.

1. Intercity and Intrastate Bus/Transit Service Criteria

All intercity and intrastate scheduled bus routes

This criterion include all the routes served by intercity and intrastate bus providers with service areas that include Montana. These services perform interstate, intercity, and intrastate functions. The services are provided along "highway corridors". The criterion does not include charter bus services.

2. Local Urban Transit Systems Criterion

Fixed route transit systems (Section 9 providers)

The urban area fixed route transit systems in Billings, Great Falls, and Missoula are all important to the State. The fixed route transit system service area boundaries are within MPO area boundaries. These systems perform a function of regional importance. We anticipate their incorporation into the statewide plan through the MPO planning process.

3. Rural Transit Systems Criterion

All fixed route rural transit system service areas (Section 18 recipients)

This criterion includes rural transit service providers. This is because the service provided is serving the statewide role of ensuring connectivity and access of Montana's citizens to smaller urban areas.

This reflects the ISTEA requirement to consider mechanisms to increase the use of public transportation and Montana's desire for a balanced multimodal transportation system.

4. Demand Responsive Transit Systems Criterion

All demand responsive service areas (with service available to the general public)

Demand responsive services are included because of the important social role that they play in ensuring basic mobility for the elderly and the disabled.

5. Air Transportation Criterion

All scheduled commercial air service routes

This criterion includes the intercity routes served within Montana and all non-stop services available between Montana and other destinations. These services perform interstate, intercity, and intrastate functions. Therefore, all city pairs having scheduled non-stop service are included.

The criterion only includes scheduled services, however, it is important to note, that air taxi and other general aviation operations move passengers as well as freight in Montana. These are addressed in more detail in the Montana State Aviation System Plan.

6. Carpool and Vanpool Criterion

All programs with participation greater than 50 persons per day

Any vanpool or carpool programs with participation greater than a 50 persons per day are to be considered part of the designated system. TranPlan 21 has not identified these. Any such programs are most likely to be in Montana's urban areas.

F. TRANSFER FACILITIES

This category refers to transportation facilities that are at discrete locations, often referred to as "nodes", in the transportation system. These are the stations, terminals, ports, airports, and other physical facilities that are used for the transfer of passengers and/or freight between modes or the collection of passengers and/or freight for accessing particular modes.

Following provides a list of the system designation criteria for the transfer facilities that perform a statewide function and that are addressed in TranPlan 21:

1. Ports-of-entry Criterion

All border crossings on designated highway corridors

Border crossings that meet this criterion are included because they are transportation-related facilities that affect the performance of the transportation system and generate unique infrastructure improvement needs. Although the crossings are operated by U.S. Customs, their capabilities and conditions affect the performance of Montana's transportation system.

2. Freight Rail Stations Criterion

All freight rail stations shipping greater than 1,000 carloads annually

Many different locations serve as freight rail stations, those serving a statewide function typically process high volumes of goods as part of interstate, international, and other long-distance movements. This criterion identifies freight rail stations that ship the largest volumes of goods. The intermodal management system and the Montana State Rail Plan focus on a larger set of freight rail stations.

3. Passenger Rail Criterion

All Amtrak stations

All stations with regularly scheduled stops are to be included. Boardings and deboardings at Amtrak stops are either intrastate, intercity or intercity. Therefore, the stations are performing a statewide function. All stations are included irrespective of the numbers of passengers served. This reflects the ISTEA goal of encouraging the use of public transportation, as well as Montana's desire for a balanced transportation system.

4. Airports Criteria

All airports with scheduled commercial service

Airports used by air carriers providing scheduled commercial service perform a statewide function.

General aviation airports with greater than 8,000 operations

Higher volume general aviation airports, those with over 8,000 annual operations (landings and takeoffs), are included because these airports provide an important role in ensuring statewide connectivity. The state's system of general aviation airports includes many more airports. This system is important and as a system performs the function of integrating the state. This system is addressed by the Montana State Aviation System Plan.

5. Intercity Bus and Intermodal Passenger Terminals Criterion

All intercity and intracity bus stations and intermodal passenger terminals

Intercity and intracity bus depots and stations perform a statewide function. The facilities are included irrespective of the numbers of passengers using them. This reflects the ISTEA requirement to consider mechanisms for increasing the use of passenger transportation. This criterion includes intermodal passenger terminals served by intercity and intracity bus.

6. Transit Centers Criterion

All transit centers

This criterion includes transit centers served by Montana's fixed route providers in Billings, Missoula, and Great Falls. These centers will be identified in the urban area plans that address MPO planning requirements but should also be included in the statewide system because of the role they play in ensuring modal alternatives in the urban areas.

7. Intermodal Freight Transfer Facilities Criteria

Freight rail stations with TOFC/COFC facilities

All freight rail stations with TOFC/COFC facilities are included. These stations will likely be included based upon the freight rail station criterion. However, any other stations with lower volumes but TOFC/COFC facilities will be included.

All ports

All ports are included because they perform economic functions of statewide importance. They involve interstate and international freight and commodity movements.

G. CONNECTORS

This category refers to the links or "connections" between the transportation facilities and the corridors that serve a statewide function. These connections generally will have lower volumes of passenger and freight traffic but serve a key role in ensuring the overall connectivity of the statewide transportation system. Examples include, local access roads to key intermodal facilities, and branch line rail facilities.

The connectors will be identified by determining the routes usually taken between the facilities and corridors designated by the preceding criterion. The criteria have not been applied to prepare an inventory of the connectors. In the urban areas this should be undertaken as part of urban area plan updates. Elsewhere, as part of the continuous planning, MDT will identify the highway connectors in conjunction with the unit of government responsible for maintaining the facility.

The following provides a preliminary list of the modal components of the connections to be included on the statewide system:

1. Highway Components Criterion

All roadways, irrespective of jurisdictional responsibility, that provide the principal connection between a transportation facility and a corridor performing a statewide function.

This will allow for the inclusion of:

- Certain rural minor collectors.
- Certain urban collectors.

- Links to designated border crossings.

2. Freight Rail Connectors Criterion

All branch lines

The freight rail connectors comprise Montana's entire branch line and shortline system and are shown in the intermodal freight system map. The entire system is included because of its economic importance and the policy goal of maintaining freight transportation choices.

IV. TRANSPORTATION SYSTEM ANALYSIS



This section evaluates current and forecasts future demands for the use of the different elements of Montana's transportation system. The conditions of the existing transportation system and the capabilities of the system, as currently configured to meet future demands are considered. For each mode, the section evaluates the key issues that will affect the transportation system over the long-range planning horizon. The range of public actions available at the state level for addressing these issues and their practical feasibility are addressed in Volume III, TranPlan 21 Policy Papers.

The transportation system analysis is presented in the following sections:

- Highways and bridges.
- Public transportation.
- Air transportation.
- Freight rail.
- Passenger rail.
- Pipelines.

A. HIGHWAYS AND BRIDGES IN MONTANA

Montana's highways are the most important transportation infrastructure in the state. Roadways connect Montana's communities and the state into the national and international transportation system. The highway system performs important multimodal and intermodal functions. It is used by bicyclists and buses and provides connections to rail stations, airports, and intermodal terminals.

The Montana Department of Transportation (MDT) is responsible for the maintenance, preservation, construction, and safety of the state's highway system. Day-to-day maintenance responsibilities include keeping roadways free of litter, snow, and storm debris. Functional maintenance includes: pavement striping, reflector and sign replacement, upkeep of guardrails, roadside brush control, patching the pavement and other activities. Pavement preservation, which aims to maximize pavement life and reduce life-cycle costs, includes: resurfacing, repaving, and the reconstruction of highways.

The state undertakes modernization and safety improvements to ensure that the highway system has adequate capacity and is safe. This involves monitoring the current system, identifying problematic areas, and implementing modernization efforts to improve traffic flow and safety. Among others, modernization efforts include bridge upgrades, construction of grade separations to eliminate conflict between trains and vehicular traffic, and system design improvements to reduce dangerous intersections, curves, and grades.

The extent of Montana's highway system, its organization, current, and future conditions are described.

1. Montana's Highway System Today

Montana is one of the most rural states in the nation, covering a large sparsely populated land area. The highway system plays a central role in allowing the state to function politically, economically, and socially. Three-quarters of all the miles traveled in Montana are driven outside of the state's urban areas. Montana's highway system connects small communities to regional service centers and the major cities to one another and the rest of the nation. As Governor Racicot stated, "highways are the life-line and life-blood of [Montana's] economy". In addition, Montana's highway system plays a key role in the National Highway System providing important interstate and international transportation corridors.

a. Extent of the highway system

The extent of the system is reflected in the number of miles of roadway that cross the state. The extent of the system is shown in Exhibit IV-1 which lists the number of center line and center lane miles by functional classification in Montana. Centerline miles, a measure of roadway length, and lane miles, a measure of roadway length multiplied by the number of lanes along each roadway segment, indicate the system's extent. Functional classification describes the role or function of the roadway. As shown in Exhibit IV-1, Montana's highway system comprises over 70,000 center line miles of roadway and 123,560 lane miles of roadway in Montana. There are 12,807 center-line miles and 28,422 lane miles on the state's highway system. These are the higher functionally classified roads that serve as the primary foundation for the mobility of most Montanans and the state's commerce. Mileage not on the state system consists of local routes and roads on federal lands.

Montanans are heavily dependent upon their highway system. In 1992, over 900,000 vehicles were registered in the state, 540,739, or 60 percent, of which were automobiles used primarily for personal mobility.

Montanans and visitors to the state used their vehicles to travel just under 24 million miles each day in 1993.

Exhibit IV-1 Montana's Highway System by Functional Classification

Functional Classification	Total Center Line Miles	Total Lane Miles	National Highway System	Center Line Miles		Urban System	State* System
				Primary	Secondary		
Interstate	1,191	4,764	1,191	N/A	N/A	N/A	N/A
Rural Principal Arterial	2,622	5,432	2,605	17	N/A	N/A	N/A
Rural Minor Arterial	2,986	6,033	N/A	2,764	171	N/A	N/A
Rural Major Collector	7,092	14,162	N/A	N/A	4,460	N/A	337.5
Rural Minor Collector	9,078	18,156	N/A	N/A	N/A	N/A	121.0
Rural Local Road	45,447	70,191	N/A	N/A	N/A	N/A	657.6
Urban Principal Arterial	172	533	62.5	48	N/A	59.7	N/A
Urban Minor Arterial	221	463	N/A	7	N/A	190.9	0.5
Urban Collector	291	584	0.5	N/A	N/A	94.5	9.4
Urban Local Street	1,632	3,242	N/A	N/A	N/A	N/A	10.5
TOTAL	70,732	123,560	3,859	2,836	4,631	345	1,136

Note: N/A=Not Applicable
State System as of 7/1/94, subject to revision.

b. Bridges

There are 4,454 bridges in Montana. In general, Montana's bridges are in better condition than the national average, with only 9.3 percent structurally deficient compared to the national average of 22 percent. Exhibit IV-2 shows the number and condition of Montana's bridges. About 20.4 percent of the state's bridges are functionally obsolete, which is slightly above the national average of 15 percent. The determination of

functional obsolescence is based upon federal standards, which might be considered excessive for some of the state's low volume roads. Most bridges in the western part of the state are in need of retrofitting to bring them into compliance with code provisions for earthquake loading resistance. The MDT's Bridge Bureau has been developing methods for retrofitting and is programming retrofits based upon a prioritized list of bridges. The MDT is developing a Bridge Management System that will provide more complete data from which to identify more accurately the functional needs of bridges.

Exhibit IV-2 Number and Condition of Montana's Bridges

Highway System	Number of Bridges	Structurally Deficient Bridges		Functionally Obsolete Bridges	
		Number	Percent	Number	Percent
Interstate	816	2	0.3	208	25.5
Non-Interstate, National Highway System	499*	24	4.8	35	7.0
State Primary	497	16	3.2	41	8.3
State Secondary	481	34	7.1	52	10.8
State Urban	60	5	8.3	26	43.3
Local On-System**	246	22	8.9	23	9.4
Local Off-System	1,855	313	16.9	524	28.3
Total	4,454***	416	9.3	909	20.4

* National Highway System, formerly Primary 492

** State highway (orphan plant)

*** Does not include structures under Federal jurisdiction such as the Bureau of Indian Affairs, the United States Forest Service, the United States Forest Service, and the Bureau of Land Management.

c. Border crossings - ports of entry

Border crossings, that serve as ports of entry from Canada into Montana, for planning purposes are considered as part of the highway system. There are 13 border crossings that handled approximately 5,600 vehicles per day in 1993. The change in the number of vehicles passing daily through each port of entry between 1983 and 1993 is shown in Exhibit IV-3.

The change in traffic at individual border-crossing facilities varied significantly because of several factors. There are only three 24-hour ports of entry, located at Roosevelt, Sweetgrass-Coutts, and Raymond. Other ports of entry operate during locally determined hours or during summer months only. The port of entry at Sweetgrass is by far the busiest facility because it is located along Interstate 15, connecting the western United States to Calgary, Edmonton, and other parts of Canada. The importance of Sweetgrass as a border crossing is increasing. In 1983, it accounted for just 25 percent of all the traffic between Montana and Canada, by 1993 it accounted for 42 percent. Overall, there were 3,164 daily border crossings state-wide in 1983, which increased over 77 percent to 5,607 by 1993. Almost half of this increase passed through Sweetgrass.

d. Freight corridors

Several major highways in Montana function as highway freight corridors. TranPlan 21 defined highway freight corridors to be corridors with 500 or more average daily commercial vehicle traffic. Interstate 94 carries between 500 and 1000 trucks daily, on average, between the Montana-North Dakota border and Billings. Similarly, Interstate 90 carries the same approximate volume of traffic from the Wyoming border to Crow Agency, where the commercial traffic volume increases to an average of 1000 or more trucks per day across the state to the Idaho border. While only limited information is available, traffic counts on these corridors suggest that a large proportion of the on Interstate 90-94 "bridge", or pass through, the state. This assumption is evidenced by the fact that Interstate 90-94 is the main route between the Midwest and the Northwest United States.

Exhibit IV-3 Vehicular Traffic at Montana-Canada Ports of Entry, 1983-1993

Port of Entry Location	1983 Traffic		1993 Traffic		1983-1993 Percent Change in All Traffic
	Commercial	All	Commercial	All	
Del Bonita	N/A	130	N/A	195	50.0
Morgan	14	88	10	103	17.0
Opheim	7	62	16	85	37.1
Piegan	15	645	63	725	12.4
Raymond	27	394	70	415	5.3
Rooseville	102	570	120	850	49.1
Scobey	23	127	10	181	42.5
Sweetgrass	167	800	400	2,340	192.5
Turner	18	88	N/A	175	98.9
Whitetail	N/A	45	N/A	40	-11.1
Whitlash	N/A	25	N/A	45	80.0
Wild Horse	21	90	N/A	281	212.2
Willow Creek	N/A	100	N/A	172	72.0
TOTAL	N/A	3,164	N/A	5,607	77.2

Source: Montana Department of Transportation, Traffic Operations Section

Interstate 15 has an average of daily truck traffic and between 500 and 1,000 trucks between Dillon and Shelby. Highway 93 also acts as a highway freight corridor between Hamilton and Polson, and between Rollins and Whitefish, where average commercial traffic ranges between 500 and 1000 vehicles daily.

2. Highway System Organization

Montana's highway system is organized by functional classification and by state designated funding systems for planning and funding purposes. The relationship between functional classification and state funding systems is described below.

Highways in Montana are organized into the following categories:

- The Interim National Highway System (NHS).
- The primary (non-NHS) highway system
- The secondary highway system.
- The urban highway system.
- State highways (orphan plant).

The relationship between these systems, the highway facilities included in the statewide system designated for statewide planning purposes, and the functional classification system is shown in Exhibits IV-4 and IV-5.

- **The Interim National Highway System (NHS).**

These are interstate and principal arterials designated by the Montana Highway Commission and approved by the United State Secretary of Transportation for inclusion on the National Highway System, as provided for by Title 23, United States Code.

Exhibit IV-4 Jurisdictional Responsibility For Highway Funding In Montana By Functional Classification

Functional Classification	Highway Corridors in the Statewide Plan	Funding Responsibility		Federal Funding Designation	State Funding Designation
		Maintenance	Improvements		
Interstate	All	State	State	NHS	NHS
Rural Principal Arterial	All	State	State	NHS STP	
Rural Minor Arterial	All	State Local	State Local	STP	Primary Highway System
Rural Major Collector	Partial (On Secondary System)	State Local	State Local	STP	Secondary Highway System
Rural Minor Collector		Local	Local		
Rural Local Road		Local	Local		
Urban Principal Arterial	All	State Local	State Local	NHS and STP	NHS Primary Urban
Urban Minor Arterial	All	State Local	State Local	STP	Primary Urban
Urban Collector	Partial (On Urban System)	State Local	State Local	STP	Urban
Urban Local Street		Local	Local		

Note: State Highways not included

Local includes city, county, United States Forest Service, Bureau of Land Management, National Park Service, and the Bureau of Indian Affairs

Exhibit IV-5
Montana's Highway System
Center Line Miles by State Funding Categories

System Classification	Center Line Miles	Total Lane Miles
National Highway System	3,859	10,344
Primary Highway System	2,836	5,793
Secondary Highway System	4,631	9,244
Urban Highway System	345	769
State Highways (Orphan Plant)	1,136	2,272
TOTAL	12,807	28,422

Note: Highway Commission and approved by the United States Secretary of Transportation for inclusion on the National Highway System, as provided for by Title 23, United States Code.

- **The Primary Highway System**

The Montana Highway Commission has the authority to determine which functionally classified principal or minor arterials are placed on the state primary highway system. The primary highway system comprises a subset of rural minor arterials and urban principal and minor arterials that were not included on the National Highway System.

- **The Secondary Highway System**

The Montana Highway Commission, in cooperation with boards of county commissioners, determines which rural minor arterials and rural major collectors are placed on the secondary highway system. Most rural minor arterials that are not on the primary highway system are included on the secondary highway system. This system also includes a subset of the functionally classified rural major collectors. It should be noted that some rural minor arterials such as the "Going-to-the-Sun" highway are on neither the state primary or secondary highway system because they are under the sole jurisdiction of a federal agency.

- **The Urban Highway System**

The Montana Highway Commission, in cooperation with appropriate local jurisdictions, determines which urban arterials and collectors are placed on the urban highway system. The urban highway system is limited to the

geographic area encompassed within the urban area boundaries established for incorporated cities with populations over 5,000. These urban area boundaries are established by the MDT in cooperation with the appropriate local government office. They include both the areas within and near the 14 incorporated cities eligible for urban area status. The urban highway system includes most urban principal and minor arterials that are not on the National Highway System or the primary highway system and also includes a subset of the urban collectors.

- **State Highways**

The state has responsibility for maintenance on a number of other roads. In the past these have been referred to as "orphan plant". In state statute they are called "state highways" and are defined as "the highways throughout the state that are not on a defined highway system but are on the state maintenance system."

- a. **Maintenance responsibility**

Maintenance responsibility by funding system is shown in Exhibit IV-6.

Exhibit IV-6
Montana's Highway System
Maintenance Responsibility by State Funding Designation

System Classification	Maintenance Responsibility (Center Line Miles)		
	State	Local	Total
National Highway System	3,859	--	3,859
Primary Highway System	2,836	--	2,836
Secondary Highway System	231	4,400	4,631
Urban Highway System	89	256	345
State Highways (Orphan Plant)	1,136	--	1,136
TOTAL	8,151	4,656	12,807

3. Current Conditions

The current condition of the highway system is considered in terms of the physical or structural condition of the roadways, the mobility that they provide, and safety.

a. Mobility

Use of the Montana highway system is increasing. The most common measure of roadway use is the vehicle miles traveled indicator. A vehicle mile traveled is the equivalent of one vehicle travelling one mile. In 1993 there were just under 24 million daily vehicle miles of travel. This traffic volume has been increasing at a rate of approximately 2.5 percent annually, which is slower than the national rate.

Exhibit IV-7 lists daily vehicle miles traveled on each element of the highway system for 1993.

In general terms, Montana's highways provide free-flowing mobility for motorized vehicles. There are very few segments of the state highway system that operate under congested traffic conditions. Those areas that are congested are primarily in the state's urbanized areas and selected corridors in western Montana.

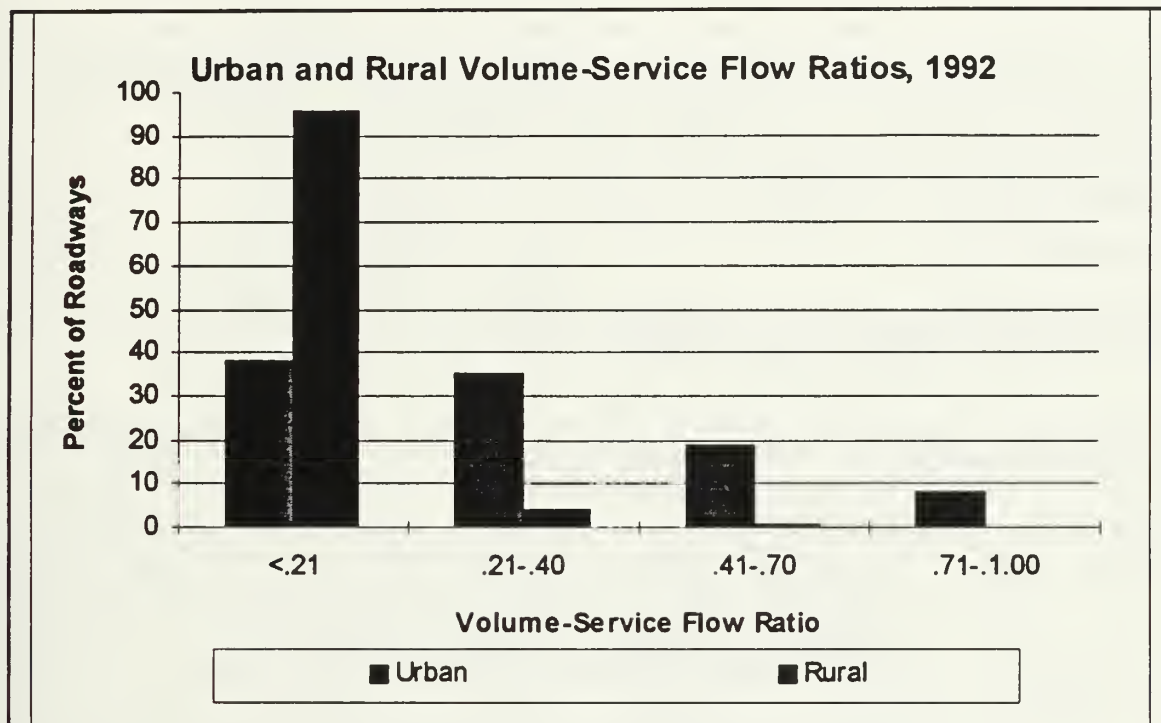
The Federal Highway Administration reports that in 1992, there were only 22 miles of roadway in Montana that had a volume-service flow ratio of 0.95 or worse. The volume-service flow ratio compares the volume of vehicles travelling a roadway and the roadway's design capacity. A score of 0.95 shows that the road is operating at 95 percent of capacity. In Montana, less than one percent of roadways operate at 71 or more of their capacity. All of the 55 miles of road that are at 71 percent or more of their capacity are located in urban areas. Further information regarding volume-service flow ratios for the state of Montana is provided by Exhibit IV-8.

Exhibit IV-7
Daily Vehicle Miles Traveled, 1993

	Daily Vehicle Miles Traveled
Rural Interstate	5,230,184
Urban Area Interstate	564,651
TOTAL INTERSTATE	5,794,835
Rural NHS	4,963,613
Urban Area Primary Route NHS	771,846
Urban Route NHS	175,156
Urban Area Local Route NHS	6,032
TOTAL RURAL NON-INTERSTATE NHS	4,963,613
TOTAL URBAN AREA NON-INTERSTATE NHS	953,034
TOTAL NON-INTERSTATE NHS	5,916,647
TOTAL NHS	11,711,482
Rural State Primary	2,468,878
Urban State Primary	549,511
TOTAL STATE PRIMARY	3,018,389
TOTAL STATE SECONDARY	1,585,363
TOTAL STATE URBAN	1,936,253
TOTAL LOCAL	5,610,959
STATEWIDE GRAND TOTAL	23,862,446

Source: MDT Traffic Operations Section

Exhibit IV-8 Urban and Rural Volume-Service Flow Ratios, 1992



The level of service analysis undertaken as part of TranPlan 21 identified corridors that are currently congested in Montana. These are shown in Map 1 in Volume I, TranPlan 21 Overview. Congestion is defined as those corridors that are below level of service C.

b. Roadway conditions

The pavement serviceability index provides a measure of pavement conditions. Based on this measure, which does not describe the overall structural condition of the highway pavement, overall the average condition of the primary and interstate systems in Montana is good. Pavement conditions are summarized in Exhibit IV-9.

Exhibit IV-9 Pavement Conditions on Primary and Interstate Roadways

Average Serviceability of Statewide System (Pavement Serviceability Index)					
Roadway Classification	1983-1984	1985-1986	1988	1990	1992
Primary System	2.6	2.8	3.0	3.4	3.3
Interstate System	3.6	3.8	3.7	3.7	3.6
Secondary System	Information Not Available				

Source: 1992 State of the Primary Pavement Report.

A Present Serviceability Index (range = 0 to 5) between 2 and 3 represents a condition that is "fair" and between 3 and 4 is "good". The data presented in Exhibit IV-9 indicates that the average Present Serviceability Index for the primary system pavements increased from the mid-"fair" range in 1983 to the mid-"good" range in 1992. For comparative purposes, the national average condition for pavements on arterial systems is somewhat below the "good" range.

During the same period, the average condition of interstate pavements was stable, in the middle of the "good" range. This partly reflects the level of investment the state made between 1983 and 1992 and the fact that federal funding for the interstate system remained approximately constant throughout the period.

Data regarding the average condition of secondary system pavements is not available for this time period. These data will become available with the implementation of the pavement management system together with information about the remaining life of the pavement. There are 4,631 center line miles on the secondary system, of which the MDT is responsible for maintaining less than 500 miles. Classification on the secondary system merely makes the roadway eligible for improvements as determined by the counties responsible for the federal funds suballocated for their use.

Secondary system pavement preservation needs are in part addressed by the Save Our Secondaries program. There is continued county concern that there is not adequate funding to meet preservation needs on the secondary system. This could be true, however, this conclusion can not be validated until the data are available. It should be emphasized that one

consequence of deferred maintenance on the part of counties will be increased preservation needs eligible for federal funding.

c. Safety

The number of fatalities and injuries per vehicle mile traveled and the number of accidents per vehicle mile traveled provide measures of highway safety. Exhibit IV-10, lists the numbers of accidents in 1992. The majority of injuries and fatalities resulting from accidents in Montana occurred in rural areas.

Exhibit IV-10
Accidents, Injuries, and Accidents in Montana, 1992

	1992 Accidents		1992 Injuries		1992 Pedestrian	
	Fatal	Non-Fatal	Fatal	Non-Fatal	Fatal	Non-Fatal
Rural	152	3,932	171	6,057	8	49
Urban	20	1,983	21	2,958	6	70
Total	172	5,915	192	9,015	14	119

Source: USDOT, Federal Highway Administration. *Highway Statistics, 1992.*

In 1992, 6,087 accidents occurred on the state's roadways, resulting in 9,015 injuries and 192 fatalities. When measured in terms of the distances traveled per incident, there were 2.25 fatalities and 105.75 injuries per 100 million annual vehicle miles traveled. Montana's fatality rates were worse than the national average, which yielded 1.75 fatalities per 100 million annual vehicle miles traveled. However, Montana's injury rates compare favorably with national rates, which were 153.99 injuries per 100 million annual vehicle miles traveled. Overall, Montana had 108.00 injuries and fatalities per 100 million vehicle miles traveled versus the national rate of 155.75 (Federal Highway Administration, 1993).

d. Air quality and the highway system

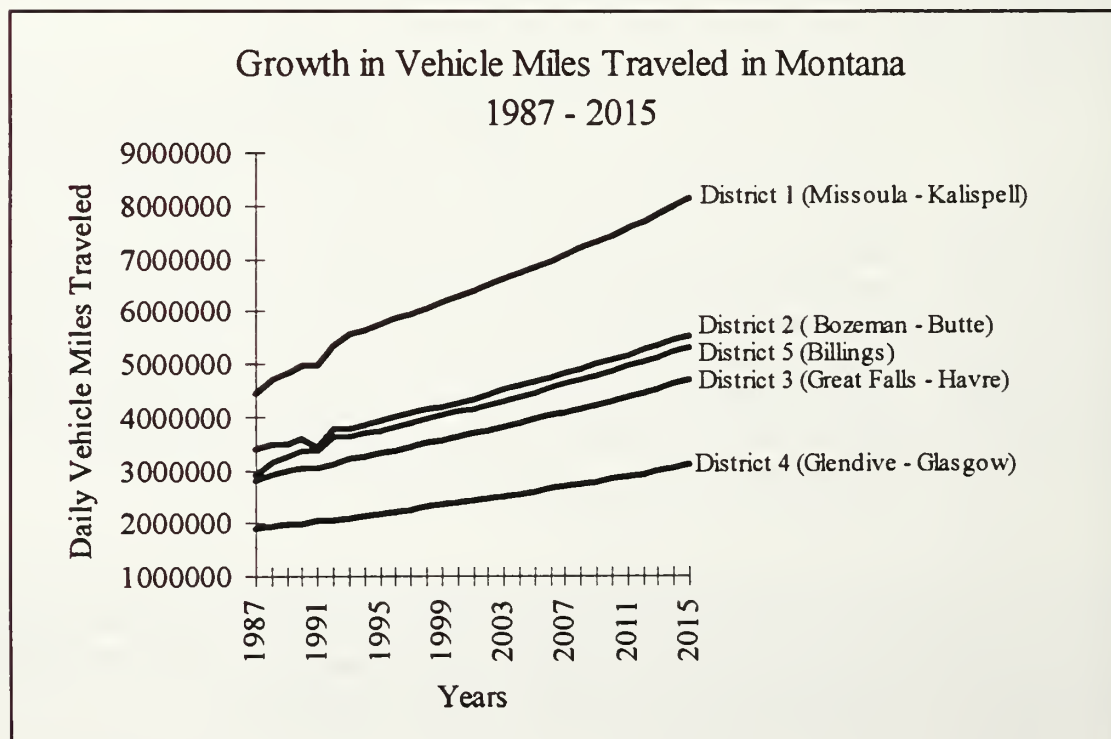
Motor vehicles contribute to air pollution through vehicle emissions. The United States Environmental Protection Agency monitors air quality, measuring the concentration of several pollutants against the standards set by the federal Clean Air Act and its amendments.

Missoula is the only area in Montana that is a moderate nonattainment area for carbon monoxide (CO) and particulate matter (PM₁₀) standards. However, there are nine other areas across the state that violate PM₁₀ standards. The population living in Missoula, 42,918 people, accounts for 5.4 percent of the state, based on 1990 census counts, while approximately 105,000 people, or 13.2 percent of the state population, lives in areas in violation of PM₁₀ standards.

4. Future Conditions

Highways will continue to be the most important component of the Montana transportation system during the next twenty years. Exhibit IV-11 summarizes the traffic growth forecast for the next twenty years. Traffic growth is projected to continue throughout the duration of TranPlan 21. For example, daily vehicle miles traveled on the state system is expected to exceed 22 million by 2015. A large proportion of this growth is projected to occur in western Montana, where the rapidly growing areas of Missoula and Flathead county are located. Areas including and surrounding Bozeman and Butte are also expected to experience a growth in the number of vehicle miles traveled daily.

Exhibit IV-11
Historic and Forecast Daily Vehicle Miles Traveled on State System
1987-2015



Sustaining existing highway performance levels to meet tomorrow's demands will be a challenge. Montana's population, economy and associated travel demands are changing. There has been a large growth in vehicle miles traveled in Montana over the past decade. This growth has varied considerably between the different regions of the state. These growth rates are particularly pronounced in the faster growing areas of the state. The growth rates are due to the overall increase in population and employment, increased tourist visits, a growth in bridge traffic through the state, and an overall growth in the number of miles driven by each Montanan. Historic rates of growth are shown in Exhibit IV-12 and forecast growth is shown in Exhibit IV-13. Daily vehicle miles traveled in the Missoula-Kalispell area (District 1) have grown at more than twice the rate of eastern Montana.

Forecasts have been developed to predict traffic demand over the next twenty years as part of the TranPlan 21, (The forecasting methodology and results by segment are described in the TranPlan 21 Technical Appendix). These forecasts indicate a slower but continued rate of traffic growth on Montana's highways. Forecasts indicate that over the next twenty years western Montana's roads could be carrying between half and three-quarters as much traffic again. This growth will likely be most concentrated in counties adjacent to urban areas.

Traffic modelling indicates that there are several corridors on the Montana highway system that are currently congested. These highway corridors, shown by a map in Volume II, are performing at or below a level of service "D", which represents roadway conditions that fit the following description:

Level-of-service D represents high density, but stable, flow. Speed and freedom to maneuver are *severely restricted*, and the driver or pedestrian experiences a generally *poor level of comfort and convenience*. Small increases in traffic flow will generally cause *operational problems* at this level (*emphasis added*).

Exhibit IV-12
Growth in Daily Vehicle Miles Traveled in Montana, 1987-1993

District	1987	1988	1989	1990	1991	1992	1993	Average Annual Growth Rate (Percent)
District 1 (Missoula - Kalispell)	4.44	N/A	N/A	4.94	4.95	5.33	5.55	4.2
District 2 (Bozeman - Butte)	2.92	N/A	N/A	3.36	3.36	3.62	3.62	4.2
District 3 (Great Falls - Havre)	2.80	N/A	N/A	3.00	3.04	3.09	3.20	2.4
District 4 (Glendive - Glasgow)	1.90	N/A	N/A	1.97	2.03	2.04	2.10	1.8
District 5 (Billings)	3.39	N/A	N/A	3.56	3.43	3.77	3.85	2.3
TOTAL	15.44	N/A	N/A	16.85	16.80	17.84	18.25	3.0

Source: MDT Highway Information System

Note: N/A=Not available

Exhibit IV-13 Forecast Traffic Growth Factors by District, 1992-2015

Highway District	Annualized Growth Rate, 1992 to 2015	Percentage Growth from 1992 to 2015			
		Interstate	Primary	Secondary	Total
District 1 (Missoula-Kalispell)	1.75	54	46	53	49
District 2 (Bozeman-Butte)	2.01	69	44	63	58
District 3 (Great Falls-Havre)	1.18	47	28	15	31
District 4 (Glendive-Glasgow)	0.65	14	17	15	16
District 5 (Billings)	1.20	28	36	30	32

By the year 2015, more highway corridors are expected to become congested, by the same level of service "D" measure, as noted in Exhibit IV-14.

Exhibit IV-14 Current and Forecast Congested Corridors

Miles of Roadway Operating at Level of Service "D" or Worse				
Current	2000	2005	2010	2015
304.6	336.6	392.6	424.5	467.2

Source: TranPlan 21 Congestion Management System.

However, the challenge for Montana is in ensuring that the system can meet the demands of the twenty-first century.

B. PUBLIC TRANSPORTATION IN MONTANA

1. Public Transportation Today

Public transportation in Montana includes urban and rural transit, demand responsive transit for the elderly and disabled, intercity bus and vanpooling. These are provided by different public agencies, not-for-profit organizations, and the private sector. Public transportation is provided at the local, intrastate, intercity, and interstate levels. Local and intrastate transit providers operate as demand responsive and fixed route providers, or a combination of the two. Intercity and interstate providers operate scheduled services on fixed routes.

As discussed in Section III Transportation System Designation, bus transit in Montana is most important to that segment of the population without access to a car. Currently, it performs a social role providing basic mobility for many Montanans. For the future, particularly in the urban areas, there are opportunities for using existing and developing new public transportation services which can provide an alternative to the single occupancy vehicle and support demand management strategies.

Federal funding defines the organization of bus transportation in Montana. Federal assistance is distributed to providers by categorical allocation that distinguishes between urban transit, rural transit, and transportation for the elderly and individuals with disability.

a. Urban Transit Systems

There are urban transit systems in Missoula, Great Falls, and Billings as shown in Exhibit IV-15. These systems receive federal funding support through block grants provided under Section 5307 (formerly Section 9) of the Federal Transit Act.

Federal funding is allocated to urban transit systems that serve 50,000 or more people. Federal funding covers 80 percent of capital and planning projects and 50 percent of deficit operating costs. Unfunded operating costs are collected from local sources or farebox revenues. The state currently plays no role in the administration or funding of urban transit systems in Montana.

Exhibit IV-15 Montana's Urban Transit Systems

Organization	Service Type	Service Area
Great Falls Transit District	Demand-Response and Fixed Route	Great Falls and Black Eagle
Metropolitan Transit (MET)	Fixed Route	City of Billings
Mountain Line Transit	Demand-Response and Fixed Route	Missoula Urban Transportation District

b. Rural Transit Systems

There are nine rural public transportation systems in Montana serving rural areas and cities under 50,000 population. Two of these, Butte and Kalispell, have fixed routes. The nine operating rural transit systems in Montana are listed in Exhibit IV-16.

The rural transit systems receive federal funding support under Section 5311 titled "financial assistance for other than urban areas" (formerly Section 18) of the Federal Transit Act. MDT currently works with the rural transit providers to administer the financial assistance under this program.

In most cases, local non-profit organizations operate the rural transit systems. Federal funding requires that there will be general public access to the service, in addition to the particular clientele for which the system is primarily intended. Federal funding for rural transit providers will cover up to 70 percent of capital and administrative costs and 50 percent of deficit operating costs.

Exhibit IV-16 Montana's Rural Transit Systems

Organization	Service Type	Base
Area IX Agency on Aging (Eagle Transit)	Demand-Response and Fixed Route	Broadus
Blackfeet Transit	Demand-Response	Browning
Butte-Silver Bow Transit	Fixed Route	Butte
City of Helena Dial-A-Ride	Demand-Response	Helena
Fergus County Council On Aging	Demand-Response and Fixed Route	Lewistown
Fort Peck Transportation System	Demand-Response and Fixed Route	Poplar
Garfield County Council on Aging (Big Dry Transit)	Demand-Response	Jordan
Powder River County Transportation System	Demand-Response	Broadus
Valley County Council On Aging	Demand-Response	Glasgow

Source: *Transportation in Montana*. Montana Department of Transportation, Transportation Planning Division. (Helena, MT: December, 1993).

c. Transportation for the Elderly and the Disabled

Transit services that meet the special needs of elderly individuals and individuals with disabilities are provided by a wide range of nonprofit organizations and social service providers across Montana. The MDT manages the allocation of the Section 5310 (formerly Section 16) program of grants and loans for meeting the special transportation needs of elderly individuals and individuals with disabilities.

Categorical funding for the elderly and disabled program is designed to supplement Federal Transit Administration support for urban and rural transit systems by financing transportation projects for elderly individuals and individuals with disabilities in all areas - urbanized, small urban, and

rural. The program seeks to enhance coordination of federally assisted programs and services in order to encourage the most efficient use of Federal resources and achieve the national goal of improved mobility for elderly persons and persons with disabilities (1992 Federal Transit Administration circular).

There are now more than 75 providers of transportation in Montana that operate vehicles funded through this program. These services are almost exclusively used by the elderly and disabled. There are approximately 40 providers that maintain a policy of public access (Montana Department of Transportation). Federal funds pay 70 percent of all capital and administrative costs, with the remaining 30 percent paid for from unrestricted federal funds, state monies, or local sources.

Exhibit IV-17 lists the providers of transportation services to elderly individuals and disabled individuals that, when space permits, will provide transportation for the public too. These services are provided by non-profit organizations such as senior centers, medical facilities, and other social service providers to collect clients and transport them from home to medical facilities, shops and other locations. The providers listed in Exhibit IV-17 all operate vehicles purchased with funds provided through this program.

Exhibit IV-17
Providers of Transportation Service for the Elderly and Disabled
Receiving Funding Assistance

Name	Service Type	Base
Area VIII Agency on Aging	Demand-Response	Great Falls
Big Horn County Council on Aging	Demand-Response	Hardin
Choteau Senior Citizens	Demand-Response	Choteau
Community Hospital	Demand-Response	Anaconda
Community Memorial Hospital/Richland Homes	Demand-Response	Sidney
Community Medical Center	Demand-Response	Missoula
Dawson County Urban Transportation District	Demand-Response	Glendive
Faith Lutheran home	Demand-Response	Wolf Point

Exhibit IV-17
Providers of Transportation Service for the Elderly and Disabled
Receiving Funding Assistance
(Continued)

Name	Service Type	Base
Fallon County Council on Aging	Demand-Response	Baker
Golden Years, Inc.	Demand-Response	Plentywood
Great Falls Senior Center Transportation	Demand-Response	Great Falls
Hollowtop Senior Center	Demand-Response	Pony
Hospitality House	Demand-Response	Big Timber
Hot Springs Senior Center	Demand-Response	Hot Springs
Human Resources Development Council/Galavan Transportation	Demand-Response	Bozeman
Human Resources Council, District #12	Demand-Response	Butte
Judith Basin Senior Citizen Center	Demand-Response	Stanford
Lake County Council on Aging	Demand-Response	Ronan
Libby Senior Citizens Center	Demand-Response	Libby
Liberty County Council on Aging	Demand-Response	Chester
Missoula Aging Services	Demand-Response	Missoula
Mountain View Medical Center	Demand-Response	White Sulpher Springs
Musselshell County Council on Aging	Demand-Response	Roundup
Native American Senior Center	Demand-Response	Flathead Reservation
North Valley Senior Center	Demand-Response	Columbia Falls
Northern Cheyenne Elderly	Demand-Response	Northern Cheyenne Reservation
Noxon Senior Citizens, Inc.	Demand-Response	Noxon
Parkview Senior Center	Demand-Response	Cut Bank
Phillips County Council on Aging	Demand-Response	Malta
Pondera County Council on Aging	Demand-Response	Conrad
Richland County Commission on Aging, Inc.	Demand-Response	Sidney

Exhibit IV-17
Providers of Transportation Service for the Elderly and Disabled
Receiving Funding Assistance
(Continued)

Name	Service Type	Base
Rocky Boy Health Board-Elders Program	Demand-Response	Rocky Boy Reservation
Roosevelt Memorial	Demand-Response	Culbertson
Rosebud Community Hospital	Demand-Response	Forsyth
Senior Citizens of Liberty County	Demand-Response	Chester
Tobacco Valley Senior Citizen Center	Demand-Response	Eureka
West Yellowstone Foundation	Demand-Response	West Yellowstone
Wheatland Memorial Hospital/NH	Demand-Response	Harlowton
Wibaux County Nursing Home	Demand-Response	Wibaux

Sources: *Transportation In Montana*. Montana Department of Transportation, Transportation Planning Division. (Helena, MT: December, 1993.).
Montana Department of Transportation Staff. August, 1994.

d. Intercity Bus

Intercity bus services are provided in Montana by the private sector. In recent years there have been large changes in the intercity bus industry. This change was particularly great in 1994. Intermountain Bus Lines has ceased business and there is a very strong possibility that Greyhound Lines, Inc. will pull out of Montana in 1995. Many of Intermountain's routes are now operated by Rimrock Trailways which is now the largest operator in the state.

The intercity bus routes currently served are shown on the passenger transportation map.

2. Public Transportation Trends

The following describes recent trends in the use of bus transportation, its availability, and the cost of service provision.

a. Ridership

Ridership provides a measure of the demand for public transportation services as currently provided in Montana. Between 1990 and 1994 ridership on Montana's urban systems declined by 13.5 percent to a statewide total of 1,591,576. Ridership on the rural transit systems decreased by 10.5 percent between 1990 and 1994 to an annual total of 280,065 passengers. In recent years there has been an increase in the use of transportation services for elderly and disabled individuals, between 1990 and 1994 overall ridership increased 19.1 percent.

Urban Transit. The recent ridership levels on urban transit are shown in Exhibit IV-18.

Exhibit IV-18
Urban Transit System Ridership, 1990 to 1994

System	Annual Ridership		Percent Change 1990 to 1994
	1990	1994	
Great Falls Transit District	467,926	446,595	-4.6
Metropolitan Transit (Billings)	859,760	645,664	-24.9
Mountain Line Transit (Missoula)	512,448	499,317	-2.6
Section 9 Total	1,840,134	1,591,576	-13.5

Source: Transit Development Plans and Communication with Transit Providers, February, 1995.

Rural Transit. The recent ridership levels on rural transit are shown in Exhibit IV-19 below.

Exhibit IV-19 Rural Transit System Ridership, 1990 to 1994

System	Annual Ridership		Percent Change 1990 to 1994
	1990	1994	
Area IX Agency on Aging, Eagle Transit	37,400	34,430	-7.9
Blackfeet Transit	8,334	15,545	86.5
Butte-Silver Bow Transit	166,616	125,118	-24.9
City of Helena Dial-A-Ride	38,964	32,420	-16.8
Fergus County Council on Aging	16,761	28,649	70.9
Fort Peck Transportation System	17,130	17,312	1.1
Garfield County Council on Aging (Big Dry Transit)	3,397	2,086	-38.6
Powder River County Transportation System	1,447	3,209	121.8
Valley County Council on Aging	22,735	21,296	-6.3
Section 18 Total	312,784	280,065	-10.5

Source: *Quarterly Report, Section 18 History Records*. Montana Department of Transportation. (Helena, MT: 1994).

There is a large variation in the ridership trends between the different rural transit systems. Blackfeet Transit, Fergus County Council on Aging, and Powder River County Transportation System have all experienced large increases in use over the past four years.

Transportation for the Elderly and Disabled. The recent use of transportation services provided for the elderly and disabled are shown in Exhibit IV-20 below.

Exhibit IV-20
Ridership of Transportation Services
for the Elderly and Disabled, 1990 to 1994

System	Annual Ridership		Percent Change 1990 to 1994
	1994	1994	
Area VIII Agency on Aging	2,067	4,790	131.7
Big Horn County Council on Aging	11,289	4,293	-62.0
Community Memorial Hospital	Not in operation	63	Not applicable
Community Medical Center	Not in operation	419	Not applicable
Dawson County Urban Transportation District	Not in operation	3,852	Not applicable
Fallon County Council on Aging	12,114	2,317	-80.9
Golden Years, Incorporated	4,707	1,580	-66.4
Great Falls Senior Center Transportation	8,675	8,653	0.1
Hollowtop Senior Center	Not in operation	4,281	Not applicable
Hospitality House	Not in operation	5,277	Not applicable
Human Resources Development Council, District 12	Not in operation	6,110	Not applicable
Judith Basin Senior Citizen Center	Not in operation	185	Not applicable
Lake County Council On Aging	Not in operation	2,445	Not applicable
Liberty County Council on Aging	3,741	3,277	-12.4
Agency on Aging Area II (Musselshell County)	5,377	3,825	-28.9
Native American Senior Center	955	2,248	135.4
North Valley Senior Center	4,816	2,771	-42.5
Noxon Senior Citizens, Incorporated	1,123	783	-30.3

EXHIBIT IV-20
Ridership of Transportation Services
for the Elderly and Disabled, 1990-1993
(continued)

System	Annual Ridership		Percent Change 1990 to 1994
	1990	1994	
Parkview Senior Center	4,402	10,199	131.7
Phillips County Council on Aging	3,372	13,453	299.0
Pondera County Council on Aging	29,075	9,905	-65.9
Richland County Commission on Aging, Inc.	13,861	16,329	17.8
Roosevelt Memorial	Not in operation	1,021	Not applicable
Rosebud Community Hospital	Not in operation	326	Not applicable
Tobacco Valley Senior Citizen Center	267	934	249.8
Wibaux County Nursing Home	369	678	83.7
Total	92,349	110,014	19.1

Source: *Performance Report by Organization*. Montana Department of Transportation. (Helena, MT: February, 1995).

Intercity Bus. Recent restructuring in the intercity bus industry has made it difficult to obtain information about intercity bus ridership. Estimated ridership on the different providers is outlined in Exhibit IV-21 below. These estimates were developed in consultation with bus operators based in Montana.

Exhibit IV-21
Estimated Intercity Bus Ridership in Montana, 1993

Organization	1993 Approximate Ridership	Base
Greyhound Lines	90,000	Dallas, TX
Rimrock Trailways	29,000	Billings, MT
Bitterroot Stages	Not Available	Hamilton, MT
Powder River Transportation and Tours	20,000	Gillette, WY

Source: Intercity Bus Operators. September 1994.

b. Availability of Transportation

As described above many communities and areas of Montana have access to a basic, if limited, bus transportation service. The actual hours of service impact the mobility of those without cars. Billings, Great Falls and Missoula transit systems have no service after 7.00 p.m. on weekdays, a more limited saturday service, and no sunday service.

In general terms, the availability of transit in Montana has remained relatively stable. The number of vehicles in operation and being supported through federal funds has increased slightly since 1990. Total annual miles traveled by transit vehicles also increased, providing more frequent scheduling and covering a larger service area. Twelve of Montana's providers of transportation services for the elderly and disabled operating in 1993 did not provide services in 1990.

Intercity bus availability in Montana has experienced considerable changes over the past decade. There has been a steady decrease in service availability and service frequencies. Cody Bus Lines and Intermountain Transportation Company are the most recent providers to end service (as of September, 1994). Greyhound Lines, Inc., may well cease operating in Montana in 1995. The trend is not all negative, Rimrock Trailways has increased services by taking over Intermountain's routes.

3. Public Transportation System Performance

Ridership per service mile, cost per passenger, and cost per service mile provide information about the performance and current operating environment of transit systems in Montana. This information is presented for the urban and rural transit systems in Exhibit IV-22.

Urban transit providers tended to have the lowest operating cost per passenger and highest numbers of riders per service mile. In recent years the number of riders per service mile on urban transit systems has fallen from 1.1 in 1990 to 1.0 in 1994. At the same time the cost per service mile and the cost per passenger carried have increased.

The rural transit systems have widely differing riders per service mile. Rural transit has lower ridership and consequently higher cost per passenger than the urban transit systems. They range from 0.9 in the case of Fergus County COA and 0.8 in the case of Butte-Silver Bow Transit to as low as 0.2 passengers per service mile for Fort Peck Transportation System. Rural transit systems have experienced cost increases that have grown faster than the increase in passengers. The average cost per rural transit system passenger was \$2.75 in 1990. By 1994 the cost had increased to \$4.65, an increase of nearly 70 percent.

4. Future Conditions

Recent trends indicate a statewide decline in the use of transit. Further, we can conclude that because the volume of all trip making has increased, the proportion of trips made by transit has declined at a faster rate. In assessing future demand for transit it is not a simple matter of forecasting future ridership based upon past trends. Future demand for transit and the future use of transit will, in part, be shaped by the policy goals set for transit, the investment priorities, and a range of other social, environmental, and land use factors that affect the attractiveness of transit to the rider.

Exhibit IV-22
Selected Transit System Performance Measures, 1990 and 1994

System	Operating Costs Per Passenger		Operating Costs Per Mile		Riders Per Mile	
	1990	1994	1990	1994	1990	1994
Urban Transit						
Great Falls Transit District	2.26	3.06	2.55	2.87	1.1	1.0
METropolitan Transit (Billings)	1.71	2.67	2.30	2.62	1.3	1.0
Mountain Line Transit (Missoula)	3.02	2.97	2.30	2.86	0.6	0.9
Urban Transit - Average	2.33	2.90	2.45	2.78	1.1	1.0
Rural Transit						
Area IX Agency on Aging (Eagle Transit)	3.44	4.28	1.46	2.53	0.4	0.6
Big Dry Transit (Garfield County Council on Aging)	3.58	6.51	1.38	1.86	0.4	0.3
Blackfeet Transit	4.80	4.07	1.27	2.55	0.3	0.8
Butte-Silver Bow	1.75	2.97	2.14	2.45	1.2	0.8
City of Helena Dial-A-Ride	4.08	5.75	2.64	2.85	0.6	0.5
Fergus County Council on Aging	Not Funded	2.58	Not Funded	2.21	0.7	0.9
Fort Peck Transportation System	9.33	9.17	2.13	2.05	0.2	0.2
Powder River County Transportation System	6.26	3.16	1.52	1.44	0.2	0.5
Valley County Council on Aging	2.57	3.33	1.21	1.59	0.5	0.9
(Rural Transit) Average	2.75	4.65	1.80	2.17	0.7	0.5

Source: • Section 18 History Records. Montana Department of Transportation.
 • Section 9 Operators.
 • Montana Department of Transportation, Transportation Planning Division.

Following discusses the key factors affecting future demand for and the delivery of bus transportation services in Montana.

- **Future demand for transit service**

The population in Montana's urban areas is growing. This will increase the overall transportation market and hence the segment of it which is currently served by transit. This will tend to increase demand. The elderly population is expected to increase which will further increase the demand underserved by public transportation.

There is no reason to expect that there will be lower rates of automobile ownership in Montana in the future. Therefore, the key factor affecting the demand for transit will be the relative attractiveness of transit and the automobile or the cross elasticity of demand between transit and the car. Nationally, evidence suggests that it is only when it is substantially more expensive to the individual to drive, in terms of out of pocket costs, time, and convenience that he/she will choose transit over the car for trips. In Montana, at the community level, there is recognition of, and support for, the air quality, social, and other benefits that arise from transit. Urban area planning that reflects this desire, if successful could increase the demand for transit. The extent of this increase will depend upon local circumstances.

Increasing transit use will require highly successful planning, transit system management, and community support. As described in Section II, Economic, Environmental, and Social Considerations and Volume IV part E, Public Transportation Policy Paper, Montana's settlement patterns, population density, land use planning, travel characteristics and other factors make it unlikely that transit will be better positioned to compete with the automobile in Montana in the near future. In fact, many trends such as suburban and rural development, and the decline of central business districts are making it more difficult for transit to compete for travel.

- **Delivery of transit services**

The future supply of public transportation in Montana will largely be influenced by the financial condition of each system. A deciding factor influencing this condition will be federal funding. In the current federal funding environment it is unlikely that there will be increases in the funding levels for surface transportation.

Aside from access to federal funding, the future supply of public transportation will be influenced by population growth, congestion, and air

quality. Montana's urban areas are expected to grow at a modest rate through 2015.

- **Development patterns and land use trends**

Urban growth is projected to be outstripped by growth in the neighboring suburban counties. Suburban growth will most likely be similar to the trend that has already occurred; decentralization of population and low density development. In the past, transportation planners have had difficulty meeting the needs of this type of development, in Montana and other states. Overall, fitting public transportation into areas designed for automobiles could be a difficult challenge.

Another variable influencing the future of Montana's public transportation system will be the character of new land development. It is difficult for public transit to reach low density areas effectively due to the distance between origins and destinations, which influences system efficiency. This will be an increasingly important issue on fixed route systems as Montana's urban areas continue to grow.

- **Uncertainty in the intercity bus industry**

Intercity bus service faces a precarious future nationally and in Montana. Despite federal efforts in 1982 to improve the viability of intercity busing, service has continued to deteriorate due to automotive, passenger rail, and airline competition (U.S. General Accounting Office, 1992).

- **Increase in the elderly and transit dependent population**

A particular challenge arises out of the fact that low-income and elderly residents are dispersed widely throughout the state. As a result, meeting the transportation needs of these population groups is both logistically difficult and potentially expensive. Montana has a wide range of providers serving a dispersed elderly and disabled population. Demographic analysis indicates that there will be approximately 51,000 Montanans over 75 years old by 2010.

5. Multimodal Role of Bus Transportation

Public transportation will be a key component of any transportation demand management policy and planning in Montana's urban areas. In its broadest sense transportation demand management includes all alternative modes other than the single occupancy vehicle. Increasing the use of transit will be a key component of any area-wide transportation demand management strategies. In addition,

transit providers have the management, marketing, technical, and operation ability to organize, schedule, and maintain vans, vanpool programs and other transportation demand management initiatives aimed at reducing growth in vehicle miles traveled.

Bus transportation is most successful at providing an alternative choice to the car for journey-to-work trips and longer intercity and interstate bus trips. It is in urban areas with traffic congestion, greater density of employment and housing, lack of parking, and longer trip times that transit can be most effective. There is little mode split data available from Montana's urban area plans to indicate the relative role that transit plays. Available evidence suggests that in urban areas, transit serves mainly a different travel market to the automobile.

On a statewide basis and for the urban areas census information provides an indication of mode split. Statewide, approximately one-half of one percent of all trips to work are made by bus. Given that most Montanans live in communities of under 50,000 this is not surprising. However, public transportation's share of all work trips is not significantly higher in the state's three metropolitan areas (those with over 50,000 population) that have urban transit systems. In 1990, in Billings 1.2 percent of work trips were made by bus, which is similar to Missoula (1.5 percent) and Great Falls (1.0 percent). We do not know how many of these trips were made by individuals who chose not to drive. This is probably a small proportion because average journey to work times in these areas are low ranging from 13 minutes in Missoula to just under 15 minutes in Billings. A survey undertaken for Missoula transit indicates that 34 percent of riders have access to a car but chose transit.

There are no systematic data available to indicate the amount of the intercity travel market in which bus travel directly competes with the automobile. Compared to automobile use, intercity bus use is low. The intercity bus industry serves many individuals for whom driving is not an option or for whom the purpose of the trip makes driving less desirable.

6. Planning For Bus Transportation

Based on the analysis of public transportation in Montana, following are the key long range threats and opportunities addressed in TranPlan 21.

Incorporating transit into multimodal planning and transportation system management. Many of Montana's urban areas that have been experiencing traffic and population growth are developing multimodal transportation plans which aim to address, to the extent possible, new travel demand through other modes and demand management. If these are to be successful then transit will need to be incorporated into planning and management of state and local highways and

roads. This involves adopting a multimodal approach at the planning and project development level, especially in the urban areas, that recognizes that transit uses the highway system and the system should be designed to accommodate transit.

Increasing the attractiveness of transit. Montana has an existing public transportation infrastructure which is not fully utilized. A key planning and management need is to increase the attractiveness of transit. This is no easy undertaking given the short journey times, limited congestion, and high automobile ownership in the state. Transit becomes more attractive when the costs of an automobile trip become high relative to the use of transit. These costs include the direct financial cost to the traveller, time, safety, reliability and other factors. The avenues open to increasing the attractiveness of transit in Montana predominantly involve improving the image of transit and ensuring that system management is focused on the customers' needs. In many cases, it is neither a planning goal nor is it desirable to increase the cost of automobile use to make transit more attractive. For example, in large urban areas parking policy greatly affects the use of transit. It would be severely detrimental to Montana's central business districts, and in conflict with many communities' desire to avoid sprawl, to limit, or increase the cost of downtown parking.

Encouraging and supporting the use of transit to ensure that there is a minimum service available. The benefits of public transportation to the state extend beyond providing modal choices for residents. Public transportation ridership is slowly declining in Montana. Between 1990 and 1994 ridership on all systems dropped 12.1 percent, from 2,253,710 passengers to 1,981,655 passengers. However, social and economic forecasts suggest that there could be increased demand for the service. As the population of the state ages and incomes remain lower than the national average, there will be no other transportation option for some of Montana's residents. Therefore, maintenance of transit capacity in urban areas and access to demand-responsive systems will be especially important for elderly and low income residents.

Preventing congestion through transportation demand management. A variety of demand management principles apply to public transportation that help to reduce roadway congestion and improve air quality. If transit is used more in the future, by increasing the number of passengers per vehicle, public transportation can help eliminate some congestion from the state's roadways. This efficiency, if successful, could help ease congestion in some urban areas and contribute to cleaner air.

Supporting air quality objectives. There are ten areas in Montana that are in non-attainment for particulate matter. Missoula, Great Falls & Billings are in non-attainment for carbon monoxide. Nonattainment areas are municipalities or regions in which federally defined maximum pollution standards have been violated. As a response, nonattainment areas are required to implement programs

that reduce pollution. Missoula must be in attainment for carbon monoxide by the end of 1995. Much of Missoula's air quality problems arise from vehicle emissions. If transit trips replace automobile trips then transit use can contribute to improving air quality. This is recognized in the use of about 25 percent of Montana's Congestion Mitigation and Air Quality funds for transit related projects.

Developing innovative transit solutions for Montana. Nationally and in Montana communities recognize the importance of transit and also its limitations. For Montana, developing innovative solutions in the different communities will be important over the long range planning horizon. This is recognized in the transit development plans that are being developed by Montana's providers.

Evaluating the public role, if any, in intercity bus travel. As mentioned earlier there is considerable uncertainty in the intercity bus industry. The threat of intercity bus service cutbacks or a complete loss could soon become a reality. Currently, there are areas of the state which are not served by any intercity bus service. In these areas many of the current public providers are not equipped and do not have the resources to provide the service. Determining the nature, if any, of a state role in intercity service is necessary.

C. Air Transportation in Montana

1. Air Transportation Today - Overview

Air transportation plays an important role in Montana because of the state's geography and distance from the nation's major economic and population centers. The ability to connect Montana's rural areas to emergency medical facilities and urban centers and to domestic and international destinations through air transportation is vital for Montana's citizens and businesses.

Air transportation services are provided by the private sector. The services provided are constrained by the need to cover costs to stay in business and meet safety-related regulatory requirements. The public sector is involved through the ownership and operation of airports. Planning the airport system and public funding of capital projects takes place at the local, state, and federal levels. At a national level, the Federal Aviation Authority has designated a system of airports of national significance, the National Plan of Integrated Airport Systems, which is eligible for federal funds.

At the state level, the MDT Aeronautics Division designates a system of airports that are included in the Montana State Aviation System Plan. This includes the system of general aviation airports that perform an essential role in ensuring

emergency medical service access, natural resource management, economic and social development and are eligible for state aviation funding. There are 61 National Plan of Integrated Airport Systems airports and 53 non-National Plan of Integrated Airport Systems airports in the 1993 Montana State Aviation System Plan.

2. Airports Addressed in TranPlan 21

TranPlan 21 addresses a subset of the airports in the Montana State Aviation System Plan. Addressed are all airports with scheduled commercial service and high activity general aviation airports. For the purposes of TranPlan 21 a distinction is made between airports with scheduled commercial air service (primary and non-primary commercial service airports), airports with commercial service subsidized through the Essential Air Service Program, and high activity general aviation airports those facilities with 8,000 or more annual operations. These airports are shown in Exhibit IV-23

There are seven "primary" commercial airports located in Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, and Missoula. West Yellowstone is a non-primary commercial airport with seasonal service. Airports are classified as "primary" because they have 10,000 or more annual scheduled commercial service enplanements and secondary when there are over 2,500.

Seven Montana airports have commercial scheduled service funded through federal operating subsidies which supplement commercial revenues. These are provided through the federal Essential Air Service program which funds service to rural airports that would not occur if left entirely to private market forces. The program is currently funded through 1997. Currently service to Glasgow, Glendive, Havre, Lewistown, Miles City, Sidney, and Wolf Point is guaranteed through the Essential Air Service Program. West Yellowstone is eligible for subsidized service but none is provided at present.

There are six general aviation airports with 8,000 or more annual operations in Montana (Federal Aviation Administration 5010 Forms). They include Chinook, Fort Benton, Hamilton, Kalispell Municipal, Laurel, and Libby. When other airports reach 8,000 annual operations they will be included under the system designation criteria.

Exhibit IV-23 Montana's Airports

Exhibit I: Montana's Airports



- Primary Commercial Airport
- Non-primary Commercial Airport
- ☆ Essential Air Service Airport
- General Aviation Airport
(> 8,000 annual operations)

Source: Official Airline Guide (OAG), June 1994, and selected airline schedules.

Air freight has become an important element in the Montana and national economies. Although the total tonnage of freight moved by air is small, expenditures on air freight have been increasing over the last decade and the value of air freight is high. Much air freight is "belly-freight" carried by the commercial carriers. The trend in Montana and the nation is toward more frequent, higher-value and lower-bulk freight shipments. Air freight service, with an average shipment distance of 1,400 miles, is important to companies competing in national and international markets and is a contributing factor in corporate location and expansion decisions.

3. Air Transportation Trends in Montana

The key air transportation trends considered are enplanements, air freight, operations, and service provision.

a. Enplanements and air freight at commercial service airports

Enplanement counts, a measure of revenue-passenger air traffic, describe trends in the demand for passenger services and tons of air-freight describe trends in the demand for air freight service at the airports with scheduled commercial air service.

The growth in passenger enplanements and air freight shipments at Montana's commercial surface airports between 1986 and 1993 are shown in Exhibit IV-24. In common with the rest of the nation, air transportation demand has grown much faster than population in Montana. Passenger enplanements increased at Montana's seven primary commercial airports by 12.5 percent between 1986 and 1993. The majority of this passenger increase took place at Kalispell, Bozeman, and Missoula. Enplanements at Billings fell by 6.8 percent during this period.

Exhibit IV-24 Enplanements and Air Freight Trends, 1986 to 1993 Montana's Primary Commercial Service Airports

Airport	Enplanements			Air Freight (tons)		
	1986	1993	Percent Change, 1986-93	1986	1993	Percent Change, 1986-93
Billings	324,514	303,855	-6.8	6,211.3	11,087.7	78.5
Bozeman	105,197	174,256	65.6	284.8	370.2	30.0
Butte	28,086	36,742	30.8	282.7	1,079.1	281.7
Great Falls	148,561	122,376	-17.6	1,137.9	1,212.3	6.5
Helena	49,920	56,176	12.5	214.4	637.9	197.5
Kalispell	55,210	89,490	62.1	179.5	534.4	197.7
Missoula	131,180	165,154	25.9	836.4	1,353.7	61.8
TOTAL	842,668	948,049	12.5	9,147.0	16,275.3	77.9

Sources:

- 1989 Montana State Aviation System Plan.
- Montana Airport Authorities and Managers. July-August, 1994.

Air freight has grown at a much faster rate than passenger enplanements. The volume of inbound and outbound air freight increased by 78 percent at Montana's primary airports between 1986 and 1993. This increase reflects the increasing volume of high-value freight shipped by air nationally. In general inbound shipments exceed outbound shipments by weight. The largest growth in air freight shipments was at Butte, Kalispell, Helena, and Billings.

A significant proportion of air freight growth can be attributed to the rise of "just in time" manufacturing and an expanding service sector both use air freight services frequently. Another freight generator roughly proportional to population is mail, which is shipped mainly on commercial airlines and is included in the data presented in Exhibits IV-24 and IV-25. The majority of air freight is inbound to Montana, while the air mail is evenly divided. In recent years, air cargo has become a larger component of air freight than mail.

b. Enplanements and air freight at essential air service airports

Demand for air transportation services provided through the Essential Air Service program increased 14.6 percent between 1986 and 1993. Exhibit IV-25 shows trends in enplanements and air freight shipments for the airports served through the essential air service program. Annual enplanements grew at a faster pace than at the major airports in Montana, while air freight actually decreased. A key element of air freight is dependent upon whether the provider is the contract carrier for the U.S. Postal Service. Passenger enplanements at the airports served through the Essential Air Service averaged 2,382 in 1986 and 2,895 in 1993.

Exhibit IV-25
Enplanements and Air Freight Trends, 1986 to 1993
Montana Essential Air Service Airports

Airport	Enplanements			Air Freight (tons)		
	1986	1993	Percent Change, 1986-93	1986	1993	Percent Change, 1986-93
Glasgow	2,555	4,096	60.3	15.0	7.9	-47.3
Glendive	1,532	1,837	19.9	7.6	3.2	-59.5
Havre	1,912	2,640	38.1	12.0	15.7	30.8
Lewistown	540	2,195	306.5	7.3	1.5	-79.5
Miles City	1,667	1,873	12.4	15.0	4.7	-68.7
Sidney	7,662	4,109	-46.4	36.6	7.6	-79.2
Wolf Point	1,808	3,512	94.2	0.4	2.1	425.0
TOTAL	17,676	20,262	14.6	93.9	42.7	-54.5

Sources:

- 1989 Montana State Aviation System Plan.
- Montana Airport Authorities and Managers. July-September, 1994.

There has been especially high growth in enplanements at Lewistown, Glasgow, and Wolf Point.

c. Operations at high activity general aviation airports

The number of annual operations at the high volume general aviation airports in 1987 and 1993 are shown in Exhibit IV-26. Increased volumes at these airports indicates the need to ensure that there are good intermodal connections and the likelihood of airport capital improvement needs.

Exhibit IV-26
Operations at High Volume General Aviation Airports, 1987 to 1993

Airport	1987	1993	Percent Change
Chinook	7,525	8,000	6.3
Fort Benton	4,650	13,000	179.6
Hamilton	10,550	12,000	13.7
Kalispell (Municipal)	6,860	not available	not available
Laurel	12,025	12,000	0.2
Libby	4,125	11,000	166.7

Source: 1989 Montana State Aviation System Plan
1993 Montana State Aviation System Plan Update

d. Level of Service

The availability of general aviation services and scheduled commercial air service, the destinations served, the frequency of the service, and the cost all describe the level of scheduled services available in Montana.

Availability of air service. In recent years Montanans have experienced a decrease in their air transportation options as major carriers such as Continental have withdrawn or reduced service. However, despite a low population density and small total population, for the time being Montana has good access to commercial air services. As shown in Exhibit IV-27, over 80 percent of Montanans are within a one county distance of an airport with commercial scheduled air services and the remaining 20 percent are almost all within one county of an airport served through the Essential Air Service program. In recent years there has been little change in the population served by air transportation. Assuming no change in the cities served by commercial scheduled service through 2015 there would be a slight increase in the population served. This is because population

growth is forecast in the parts of the state that are already better served by air transportation.

Exhibit IV-27
Montana Population Served by Airports with Scheduled Service¹

Population	1990	1993	2015
State Population	799,065	827,300	956,200
Population Served	655,898	678,800	809,200
Percentage of State Population Served	82.1	82.1	84.6

Sources: 1990 U.S. Census for Governmental Units and National Planning Association Data
Services population projections.

1. Assumes no change in the number of airports with scheduled commercial service

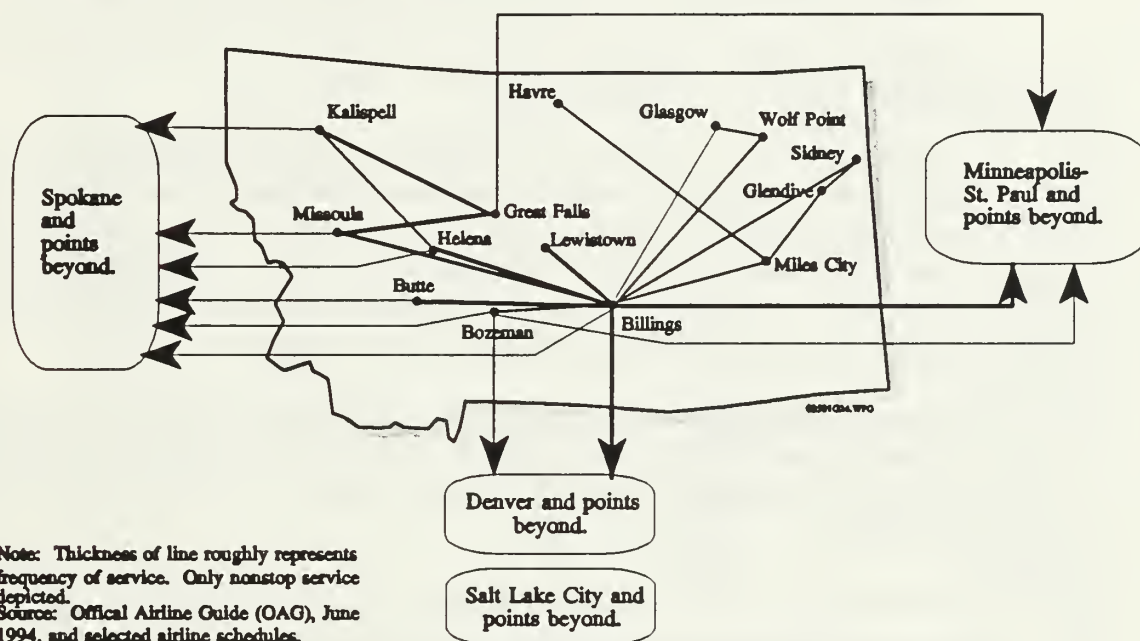
Destinations served. There have been frequent changes in the airlines serving Montana and their schedules in recent years. These changes reflect the impacts in Montana of the restructuring in the airline industry in response to deregulation and the new lower-cost entrants into the industry. These changes have resulted in Montana being served mainly by regional carriers and smaller equipment.

The air transportation industry has experienced great change in recent years and this affects the destinations served from Montana's commercial service airports. Since airline deregulation there have been many changes that have affected Montana. The industry appears to be moving from servicing markets such as Montana solely through hubs to more point to point service, directly linking city pairs. There are frequent changes in the destinations served by non-stop flights from Montana. Exhibit IV-28, provides a snapshot of the destinations served.

Montana has relatively good west, south, and east bound access into the national and international transportation system. Most primary commercial service airports have direct flights to Denver, Colorado; Minneapolis-St. Paul, Minnesota; Spokane, Washington; and Salt Lake City, Utah. There is no direct service between Montana and Canada.

Exhibit IV-28 Montana's Scheduled Commercial Air Transportation System

Exhibit II: Montana's Scheduled Commercial Air Transportation System



Within Montana there is service between many of the major cities. The communities with Essential Air Service have access to Billings and from there to the national and international system.

Frequency of service. Frequency of service is an important indicator of the level of air transportation service. Although served by smaller equipment, communities such as Helena have four flights a day from Billings and five flights a day to Spokane. There are similar frequent levels of service in Montana's other larger cities.

Cost of service. Price is the key factor affecting the demand for air transportation services. This is determined solely by the airlines providing the service. Due to its small size, much of Montana's air transportation

market is not likely to experience the competitive conditions which have reduced fares considerably in other markets. Elsewhere the entry of low fare carriers has induced large volumes of additional enplanements.

4. Future Air Transportation Conditions

The future level of air transportation service in Montana and the demand for air transportation will be determined mainly by factors which are beyond the state's control. The demand for air transportation will be driven by market size which is a function of Montana's population and economy, the cost of air travel, and economic growth nationally. The level of service will be determined by the business decisions the commercial airlines make.

Demand for air transportation. Montana's forecast population and economic growth will increase the demand for air transportation. Historic trends show that enplanements have increased with economic and population growth. The available forecasts indicate that air travel demand will continue to experience growth over the next twenty years. Forecasts for enplanement growth developed by the Federal Aviation Administration are provided in Exhibit IV-29.

Kalispell International, Bozeman, Helena, and Billings are expected to experience the most growth by 2010. Other airports will likely grow, but not as significantly. Air traffic is expected to almost double at Helena and nearly triple at Kalispell by 2010.

Exhibit IV-29
Passenger Enplanement Forecasts - Montana, 1990-2010

Airport	1993 Enplanements	2010 Enplanements	1993-2010 Percent Change
Billings	303,855	525,000	72.8
Bozeman	174,256	270,000	54.9
Butte	36,742	55,000	49.7
Great Falls	122,376	220,000	79.8
Helena	56,176	104,000	85.1
Kalispell	89,490	251,000	180.5
Missoula	165,154	283,000	71.4
Total	948,049	1,708,000	80.2

Sources: Draft Terminal Area Forecasts. Federal Aviation Administration, 1994. Montana Airport Manager's Association, 1994.

The available forecasts for passenger enplanements at the airports with Essential Air Service subsidies predict a slower growth rate than at primary commercial airports. The slower rate of growth reflects the stagnant or declining population anticipated in many of the communities served.

The total number of current and forecast operations at the Essential Air Service airport and the high activity general aviation airports are shown in Exhibit IV-30.

Exhibit IV-30
Current and Forecast Annual Airport Operations

Airport	1993 Operations	2003 Operations
Essential Air Service Airports		
Glasgow	21,000	24,000
Glendive	6,000	8,000
Havre	11,000	15,000
Lewistown	15,000	14,000
Miles City	11,000	13,000
Sidney	28,000	29,000
Wolf Point	11,000	13,000
General Aviation Airports		
Chinook	8,000	9,000
Fort Benton	13,000	15,000
Hamilton	12,000	14,000
Kalispell (municipal)	not available	not available
Laurel	12,000	13,000
Libby	11,000	12,000

Source: Montana Aviation System Plan Update.

There are no forecasts available for air freight shipments in Montana. However, it is reasonable to expect that the recent trend increase in air freight shipments will continue. If Montana is successful in promoting economic development through value added manufacturing and agriculture there will be an even larger increase in air freight.

Supply of air transportation services. Local airport master plans document the capital improvements necessary to accommodate increased air traffic. The state's airport infrastructure appears to be adequate to accommodate the forecast increase in operations. In no case do projected annual operations through 2010 exceed the design capacities at the primary commercial service airports, as shown in Exhibit IV-31.

Exhibit IV-31
Forecast Volumes and Capacities at Montana Airports
Through 2010

Airport	Annual Operation Capacity	2010 Forecast Annual Operations
Billings	350,000	182,000
Bozeman	195,000	64,000
Butte	195,000	26,000
Great Falls	210,000	103,000
Helena	230,000	104,000
Kalispell	195,000	100,000
Missoula	265,000	115,000

Sources: 1989 Montana State Aviation System Plan and 1993 Update.
Draft Terminal Area Forecasts, Federal Aviation Administration. 1994.

Changes in the organization of the airline industry will continue to affect air transportation service levels in Montana. It is not possible to predict the effects that this will have on service availability in Montana. Recent national trends have resulted in the growth of regional carriers such as Horizon Air which has an extensive service in Montana and the emergence of low cost airlines such as Southwest Airlines that serve point to point markets. It is too early to determine whether or not Frontier Airlines, a low cost carrier, recent entry into the Montana market will be successful.

An issue that may influence Montana's future supply of air transportation service is the vulnerability of the Essential Air Service program funding. If the federal government removes this funding support it could result in Glasgow, Glendive, Havre, Lewistown, Miles City, Sidney, and Wolf Point airports losing commercial air service. These communities would then be served by general aviation and 20 percent of the state's population would lose access to scheduled air service. The current federal policy environment is one in which government

is scaling back and letting market forces determine levels of investment. This environment will make it harder to present the case for continued subsidy through the Essential Air Service program.

5. Planning for Air Transportation in Montana

Based on the analysis of air transportation in Montana, following are key long-range threats and opportunities addressed in TranPlan 21.

Ensuring airport improvement needs are met. The airports addressed by TranPlan 21 are all included in the National Plan of Integrated Airport Systems and receive federal funding for capital improvements through the Federal Aviation Administration's Airport Improvement Program. This is a grant program and local airport operators apply for funding directly to the Federal Aviation Administration. It will be important to ensure that Montana airports are successful in funding their projects.

Although not included in TranPlan 21, it is important to note that there are limited resources to fund all Montana's general aviation airports. These airports provide a lifeline ensuring access for many communities to emergency medical facilities. Many of the smaller general aviation airports are unable to raise sufficient funds for major capital improvements.

Improving intermodal connections at airports. Montana's airports are among the largest generators of intermodal passenger trips in the state. Improving intermodal connections for all modes will be important as passenger volumes increase. Many of Montana's commercial service airports are in close proximity to air passengers' final destination. Ensuring that there are feasible options to access airports other than by car, and for visitors not to have to rent a car could help reduce traffic growth, particularly in the very busy summer months. It is also important to note that as enplanements increase, airports will become large surface transportation trip generators due to the high concentration of employment associated with the businesses located in the airport, further increasing the importance of access.

Retaining the essential air service subsidy program. As described earlier, the Essential Air Service program which was created during airline deregulation in 1978, could be reduced after 1997 when the current program funding will be reconsidered. If federal subsidies are reduced or eliminated, central and northeastern Montana could be impacted severely. A loss of air service in these areas would eliminate the one north-south travel alternative to automobile travel and adversely impact the integration of the economy into the state and national economy.

The total annual subsidy provided by the federal government is just over \$3.5 million. Reducing the role of government and the federal budget is the dominant feature in the current federal policy environment. Therefore, Montana will need to ensure that the case for the program continues to be made. In the event that the federal subsidy is removed. The state will need to determine whether it wishes to establish a state-level funding mechanism.

Establishing working relationships with commercial airlines to preserve existing and facilitate new service. The services which commercial airlines provide in Montana often represent a small portion of their overall business. Through establishing a working relationship with the airlines it may be possible to facilitate the retention and/or expansion of service through increasing the carrier's understanding of opportunities in Montana, removing any misunderstandings, and helping address any obstacles. One area of interest to many in Montana is direct service into Canada. There is a potential role for state government in helping local airport operators to promote service between Montana and Canada.

D. FREIGHT RAIL IN MONTANA

1. Freight Rail Today

Montana's freight rail system is a key element of Montana's overall transportation system. Montana is served by an extensive network of mainlines and branchlines. There are 69 stations with over 500 carloads inbound and outbound annually.

The primary commodities shipped by rail from the state, in terms of volume, are coal and other bulk commodities such as grain, lumber products, petroleum products, talc, metals, chemicals, and glass mince. More carloads of freight rail originate than terminate in Montana. The demand for freight rail from commodity producers is expected to remain fairly stable in future years.

The Burlington Northern Railroad is the dominant force in Montana's freight rail market. In 1982, Burlington Northern moved more than 155,000 originating and terminating non-coal carloads in the state, accounting for almost 95 percent of the total Montana traffic. Since 1982, restructuring in the railroad industry in Montana gave rise to a number of shortline operators which serve as "connectors" to Burlington Northern's system. This restructuring was extensive, by 1991 Burlington Northern was responsible for only 53 percent of originating and terminating non-coal freight rail movements. Montana Rail Link, a shortline operator that did not exist in 1982, was responsible for over 35 percent of the originating and terminating total non-coal freight traffic in the state by 1991.

During the 1980s, almost 1,400 miles of track were abandoned. In other cases, branchlines that were formerly operated by the major railroads now operate as independent shortlines. Communities no longer directly served by rail must now haul their commodities to the nearest transfer facility.

Exhibit IV-32 shows the volumes of originating carloads shipped by the mainline and shortline operators in 1982 and 1991. It is important to note that despite branchline abandonment, there was very little change in the total volume of commodities that were shipped out of state on rail.

Exhibit IV-32 Volume of Originating Freight by Railroad, 1982 and 1991

Railroad	1991 Originated Carloads	1991 Total	1982 Total	1982-1991 Change
Burlington Northern	73,954	87,499	155,434	-67,935
Central Montana Rail	1,613	1,644	0	1,644
Dakota, Missouri Valley and Western	1,152	1,152	773	379
Montana Rail Link	42,024	58,676	0	58,676
Montana Western	1,851	2,742	0	2,742
Rarus	2,323	2,407	1,407*	1,000
Union Pacific	5,921	12,122	6,199	5,923
State	128,838	166,242	163,813	2,429

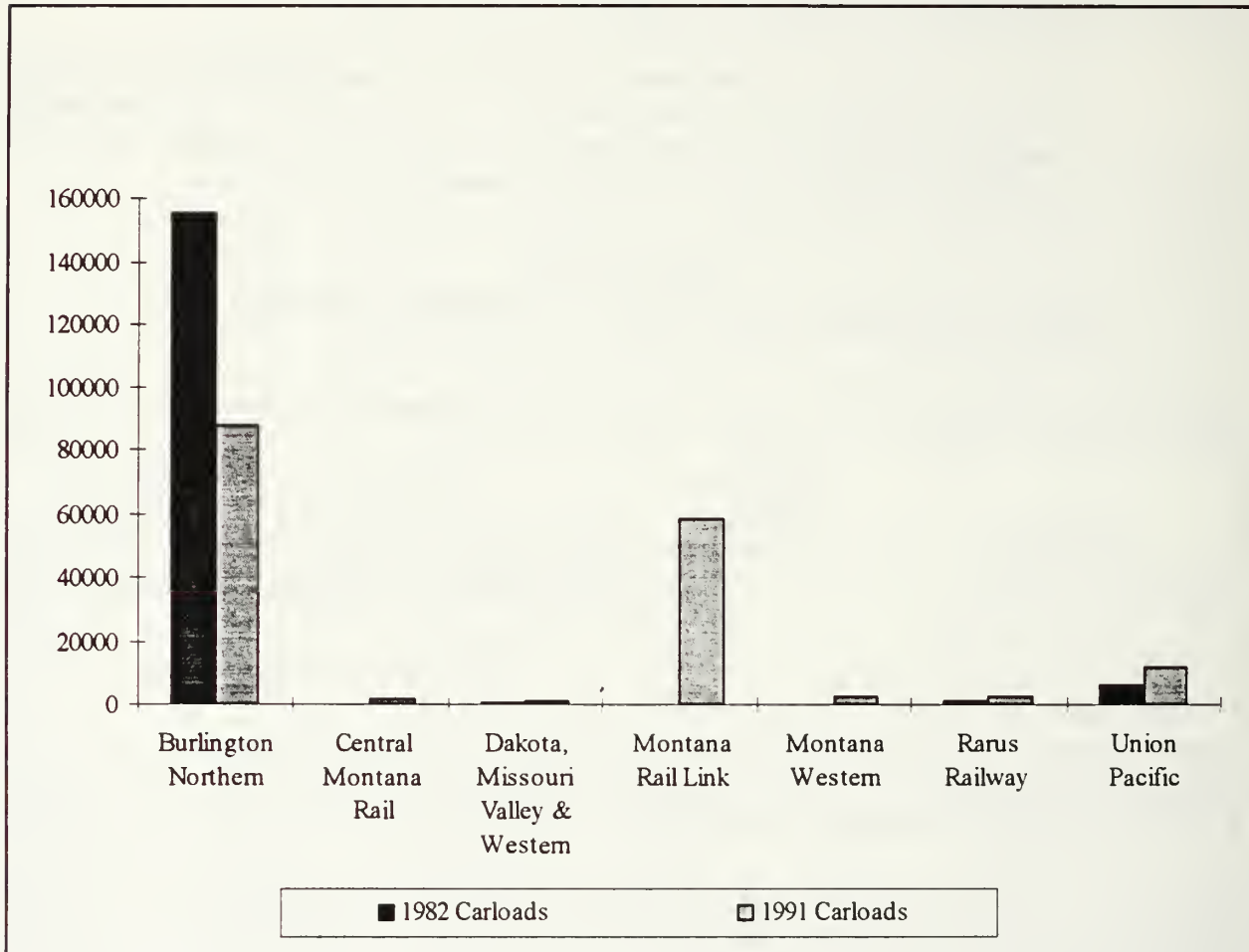
* Note: 1982 data was not available for Rarus Railway, 1983 data is presented.

Sources:

- MDT and Independent Rail Operators.
- 1993 Montana State Rail Plan Update.

The number of carloads shipped by the different railroad operators is also charted in Exhibit IV-33. This illustrates the important role which the shortline operators now play in Montana.

Exhibit IV-33
Volume of Originating and Terminating Carloads Freight by Railroad,
1982 and 1991



2. Freight Rail Trends in Montana

The following describes recent freight rail trends in Montana.

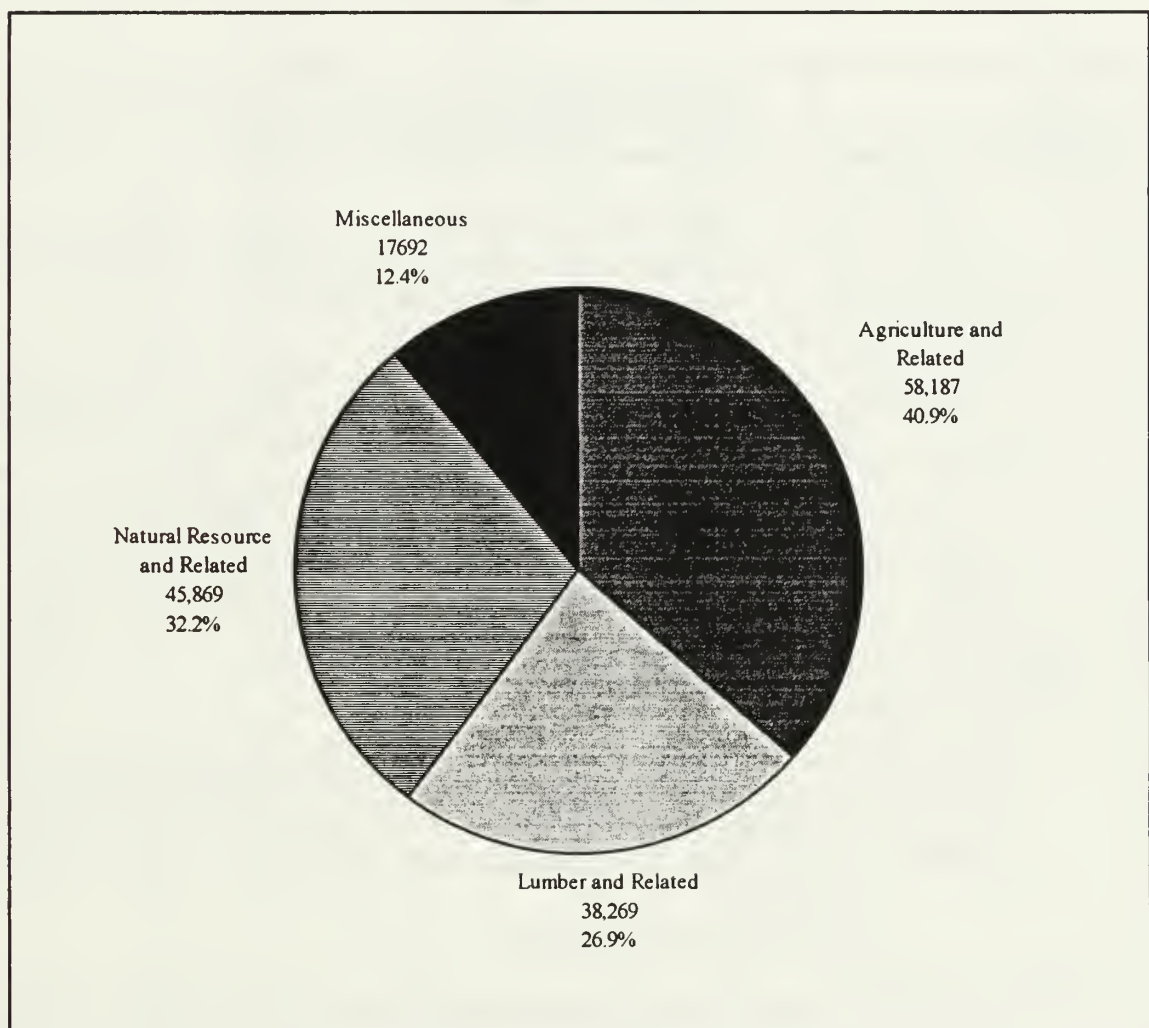
a. Miles of Track

In 1992, there were 3,463 miles of rail track in use in Montana. A decline from over 4800 miles 14 years earlier. The decrease arose from the abandonment of some 1,371 rail miles, primarily by the Milwaukee Railroad and Burlington Northern Railroad.

b. Demand For Freight Rail, Commodities shipped

Railroad operators in Montana meet the demands for the shipment of large volumes of coal direct from the coal mines and for the shipment of a variety of other bulk commodities. Exhibit IV-34 shows the breakdown of bulk commodities shipped by rail in 1991.

**Exhibit IV-34:
Freight Rail Shipments By Commodity, 1991 (Non-Coal)
(Originating and Terminating Carloads)**



Source: Freight Rail Operators in Montana, 1994

As Exhibit IV-34 illustrates, Montana's freight rail industry meets the demands of the state's basic economic sectors. The freight rail market for bulk commodities in Montana has the following segments:

- **Agriculture and related commodities.** This includes: grain, bulk food, feeds, fertilizer, flour, farm products, beverages, corn, and soy beans. This accounted for 41 percent of all shipments in 1991.
- **Natural resource and related commodities.** This includes: petroleum, aluminum/nonferrous metals, steel, chemicals, minerals, asphalt, and talc. This accounted for 32 percent of all shipments in 1991.
- **Lumber and related commodities.** This includes: raw lumber, plywood, particle board, pulpmill, and paper. This accounted for 27 percent of all shipments in 1991.
- **Miscellaneous goods.** This includes: glass mince, hazardous waste, construction products, gypsum and other materials. This accounted for 12 percent of all shipments in 1991.

In a special category because of the sheer scale of production and transportation is the shipment of coal from the Powder River Region of Southeast Montana. Several coal mines operate in the area, with Burlington Northern shipping approximately 90 percent of the extracted resource. In 1991, Burlington Northern moved over 36 million tons of coal, averaging 8.3 trains per day directly from the coal fields. The busiest coal stations were located at Colstrip and Decker, where 16.6 million and 15.5 million tons of coal were shipped, respectively (1993 Montana State Rail Plan Update).

The rail system is oriented to transporting these commodities out of the state to markets nationwide. The overwhelming majority of freight rail traffic in Montana originated in the state. Most inbound carloads involve shipment of commodities such as fertilizer for agricultural production.

c. **Freight rail stations**

The commodities described above access the freight rail system at many different points across the state. In many cases the commodities are hauled by truck to the rail station or grain elevators, and then are loaded onto rail cars. For the purposes of TranPlan 21, the stations with the highest volumes of commodities passing through them are identified. Exhibit IV-35, lists the 40 freight rail stations (stops) in Montana that generated 1,000 or more non-coal rail-carloads in 1991.

Schilling, Silver Bow, and Billings were the busiest freight rail stations in the state, each handled over 10,000 originating and terminating carloads of commodities such as asphalt, fiberboard, and grain. As evident with the stations in Schilling (near Missoula), Silver Bow, and Billings, the most active freight rail stations are located in or near Montana's urbanized areas. In general, these larger stations handled a more diverse array of products and commodities than their smaller (less than 1000 carload) counterparts.

Exhibit IV-35 Freight Rail Stations Handling Over 1,000 Carloads, in 1991

Station	Originated carloads	Total carloads	Percent grain	Grain capacity	Principal Commodities
Belgrade	1,207	1,346	30.5	1,070	Lumber, grain
Big Sandy	1,199	1,373	99.1	617	Grain, fertilizer
Billings	7,587	10,087	10.3	2,110	Asphalt, sugar, grain
Bonner	2,129	2,129	0.0	0	Plywood, chips
Brownman Spur	1,199	1,199	0.0	0	Chips, lumber
Butte	not available	2,002	0.0	0	Copper Concentrates
Carter	1,100	1,119	98.3	1,079	Grain, fertilizer
Circle	1,067	1,092	97.7	660	Grain, fertilizer
Columbia Falls	3,146	3,200	0.0	0	Particle board, lumber
Conkelley	2,249	6,882	0.0	0	Aluminum/Non-Ferrous, chemicals
Conrad	3,222	3,284	98.9	1,548	Grain, fertilizer
Cut Bank	2,315	2,352	97.9	1,058	Grain, fertilizer
East Billings	146	1,211	0.0	0	Fuel gas, liquid propane gas
East Helena	848	3,705	0.0	0	Concentrates, lead bar
Eureka	2,203	2,203	0.0	0	Lumber, pulpmill
Fairfield	1,120	1,124	98.9	2,400	Grain, fertilizer
Fort Benton	1,401	1,415	98.9	1,772	Grain, fertilizer
Great Falls	3,410	4,533	48.6	3,222	Grain, fertilizer

Station	Originated carloads	Total carloads	Percent grain	Grain capacity	Principal Commodities
Havre	2,498	3,335	74.2	1,711	Grain, petroleum products
Kalispell	2,817	3,043	9.8	760	Lumber, plywood
Kershaw	1,054	1,056	99.8	550	Grain, fertilizer
Laurel	3,712	4,317	1.0	220	Asphalt, liquid propane gas
Lewistown	1,036	1,059	74.6	622	Grain, fertilizer
Libby	4,219	4,415	0.0	0	Pulpmill, lumber
Livingston	1,062	1,220	7.5	85	Lumber, chips
Missoula	1,023	2,286	0.0	0	Particle board, chemicals
Moccasin&CMR	2,181	2,214	98.1	436	Grain, fertilizer
Olney	2,025	2,025	0.0	0	Particle board, lumber
Plentywood	1,028	1,033	99.6	1,084	Grain, fertilizer
Rudyard	2,146	2,147	99.9	2,700	Grain, fertilizer
Schilling	9,133	14,357	0.0	0	Fiber Board, waste
Shelby & TOFC	2,223	5,950	24.0	3,525	Grain, Intermodal Domestic
Sidney	3,660	4,251	10.3	1,181	Bulk foods, petroleum products
Silver Bow	4,342	10,501	not available	0	not available
Sweetgrass	5,253	5,456	3.1	90	Petroleum products, fertilizer
Three Forks	1,935	2,008	4.3	348	Talc, grain
Townsend	1,990	2,036	6.7	180	Lime, lumber
Trident	2,167	3,179	0.0	0	Cement, coal
Warren	2,187	2,228	0.0	0	Glass Mince
Wolf Point	1,426	1,433	99.5	2,883	Grain, fertilizer

Note: Grain Capacity measured in thousands of bushels.
 Sources: Grain Elevator Directory 1993. Burlington Northern Railroad.
 Official Railway Guide, Freight Service Edition. June/July 1993.
 Other data collected by MDT from independent rail operators.

In 1991, there were a further 29 freight rail stations that shipped and received between 500 and 999 carloads each. The majority of these "smaller" stations and stops existed primarily for the purpose of moving grain, although there were several others dominated by lumber products and miscellaneous shipments. Regardless of the principle commodity shipped, these stops and stations were important to the economies of their communities.

d. Intermodal Freight Rail

Intermodal freight rail in Montana involves the transfer of trailers onto flat cars, containers onto flat cars, the reload of lumber from trucks onto rail cars, and the transfer of grain from trucks to hopper cars. The vast majority of trailer on flat car and container on flat car intermodal transfers take place at the Port of Montana in Butte, the Northern Express Transportation Authority, in Shelby, and at Burlington Northern's intermodal terminals in Billings, Shelby, and Missoula. Grain transfer takes place at hundreds of terminals. Both the Port of Montana and the Northern Express Transportation Authority have experienced large increases in intermodal traffic during the past three years. Burlington Northern's facilities are also active, with approximately 900 carloads in and out each month at Billings, and 500 in and out at Shelby. In Missoula the numbers are smaller with between 50 and 100 carloads in and out each month.

The location of the major intermodal facilities in Montana is shown in Exhibit IV-36.

3. Level of Service

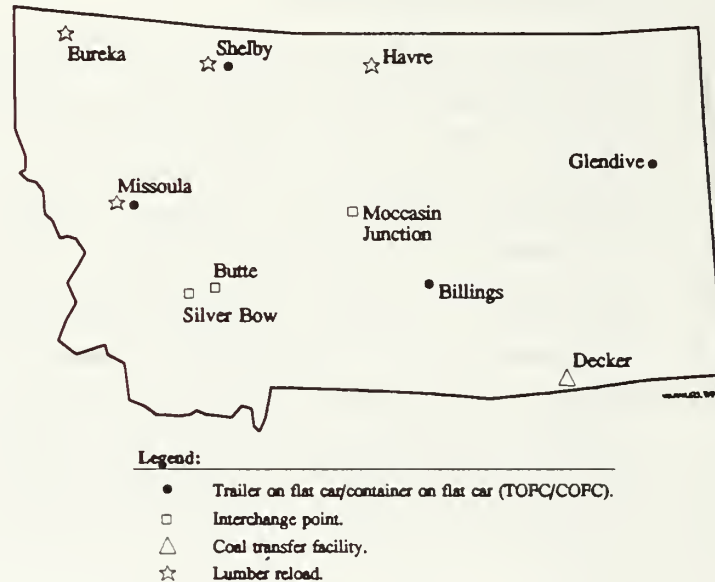
The availability of freight rail, the cost of the service, speed, and safety are all performance measures that describe the level of freight rail service in Montana.

a. Availability of freight rail service.

Despite the loss of branchlines most communities in Montana have access to the rail system. The availability of service is largely determined by the economics of the railroad industry. In those parts of the state where service has been lost commodities now are hauled further to grain elevators or rail stations. This increases the transportation costs for the agricultural sector of the economy.

Exhibit IV-36 Montana's Principal Intermodal Facilities.

Exhibit III: Montana's Freight Rail Transfer Facilities



Source: Freight Rail Guide?

b. Cost of service, freight rates.

The Burlington Northern Railroad establishes the freight rates for commodities shipped out of the state. Burlington Northern is in a dominant position in Montana with little competition for hauling bulk commodities except from the limited single track branchline connection to the Union Pacific Railroad from Silver Bow and from the trucking industry.

c. Track speed.

A good indicator of freight rail performance and competitiveness is the dependability and speed of the system. Although most freight rail shipments consist of low value bulk commodities, the capacity to deliver in a timely fashion is important. Most main lines in the state (43.6 percent) are speed rated at 60-79 miles per hour. Another 940 miles (28.7 percent) are rated for speeds between 40 and 49 miles per hour. These routes serve as the backbone of the system and pick up traffic from branch lines. Most of Montana's rail branch lines are rated between 10 and 35 miles per hour: 207.7 miles (6.29 percent) are rated at 30-35, 649 miles (19.7 percent) at 25, and 66.7 (2 percent) miles at 10 miles per hour (1993 Montana State Rail Plan Update).

Main line speed ratings generally appear adequate. However, although branch lines carry a smaller amount of traffic, low speed ratings may encourage some shipments to trucks. Low branch line speeds limit the potential for competition between truck and rail for intrastate shipping of certain goods. They increase the likelihood that intermodal and more time sensitive rail shipments will be directed to mainlines stations and then broken down for shipment by truck to their ultimate destinations across the state.

d. Safety.

Accident trends indicate that the safety of freight rail has improved. Exhibit IV-37 contrasts rail grade crossing accidents between 1980 and 1991, excluding derailments, in Montana with neighboring states. The number of accidents has decreased considerably, with a 25 percent decline during the 11 year period.

Exhibit IV-37
Rail Grade Crossing Accidents (excluding derailments), 1980 and 1991

State	1980 Accidents	1991 Accidents	Change, 1980-1991	Percent Change, 1980-1991
Montana	24	18	-6	-25.0%
North Dakota	19	15	-4	-21.1%
South Dakota	7	26	19	271.4%
Wyoming	36	5	-31	-86.1%
Idaho	11	57	46	418.2%

Source: Federal Railroad Administration, Office of Public Affairs. August, 1994.

4. Future Conditions

The following discusses the key factors affecting the demand for freight rail and the provision of railroad service in Montana.

- **Future Demand**

Future demand for freight rail will be centered upon the shipment of bulk commodities. As described in Section II, Social and Economic Trends, Montana's basic industries will continue to generate the demand for the shipment of bulk commodities out of the state. These industries are not expected to grow greatly but they will continue to be a major component of the Montana economy.

For example, grain will remain a major component of Montana freight, 90 percent of grain is now shipped by rail. Production is not expected to increase greatly (Montana Agricultural Statistics Service). Montana agriculture, forestry, and mining industries are expected to increase their output only 2.29 percent over 1990 levels by 2010 (National Planning Association Data Services). Therefore, agricultural demand for rail will likely remain relatively constant well into the future.

The lumber industry has traditionally been heavily reliant upon freight rail, yet this may change considerably in the future. Wood offerings from national forests are declining and will continue to do so for the next several years. Therefore, the volume of freight produced by lumber and wood related industries will probably decline. Moreover, the source of raw lumber may shift from the western region to central and eastern counties (U.S. Bureau of Economic Analysis). This may present challenges in matching the resource with the means of transport.

Coal reserves in eastern Montana are estimated to exceed 50 billion tons. In 1991 the Burlington Northern Railroad shipped 36 million tons at an average pace of 8.3 trains per day. The future of freight rail with respect to coal appears to be healthy, yet markets external to Montana will determine the level of coal traffic and its profitability. Therefore, coal traffic leaving Montana could fluctuate considerably because demand is market driven. However, there will likely be a relatively stable level of coal traffic, in the eastern portion of the state, well into the future. Coal can be burnt in Montana and shipped as electricity.

The railroad industry expects there to be an increase in the intermodal shipment of freight. Recent evidence supports this. Nationally, there has been an increase in intermodal activity. This is expected to continue in the future.

- **Provision of railroad services**

Freight rail service is provided exclusively by the private sector in Montana. The provision of service of the next twenty years will depend upon the demand for service and changes in the organization of the railroad industry. The major railroads are in the process of merging. The implications for service in Montana are not clear at present. It may well improve north south service.

There are no branchlines that are currently threatened with abandonment. In general, abandonments occur where there is insufficient traffic to cover the operating and maintenance costs. However there is no guarantee that the situation will not change in the future.

5. Planning for Freight Rail

Based on the analysis of the trends affecting freight rail in Montana and the key issues analyzed in the intermodal freight mobility paper, following are the long range threats and opportunities addressed by TranPlan 21.

Tracking developments in the railroad industry that can effect Montana. The state has no direct role in the provision or regulation of rail service in Montana. However, the state has an interest in the availability of an efficient rail infrastructure that will ensure that the state's basic industries have competitively priced access to the national and international market. Therefore it is important for the state to track developments in the rail industry to ensure that Montana's interests are not adversely impacted.

Facilitating the preservation of branchlines. Once rail branchlines are abandoned, the use of the right of way for rail is likely to be permanently lost. There is a role for government to work with the mainline and shortline operators to remove any barriers to branchline preservation by the private sector.

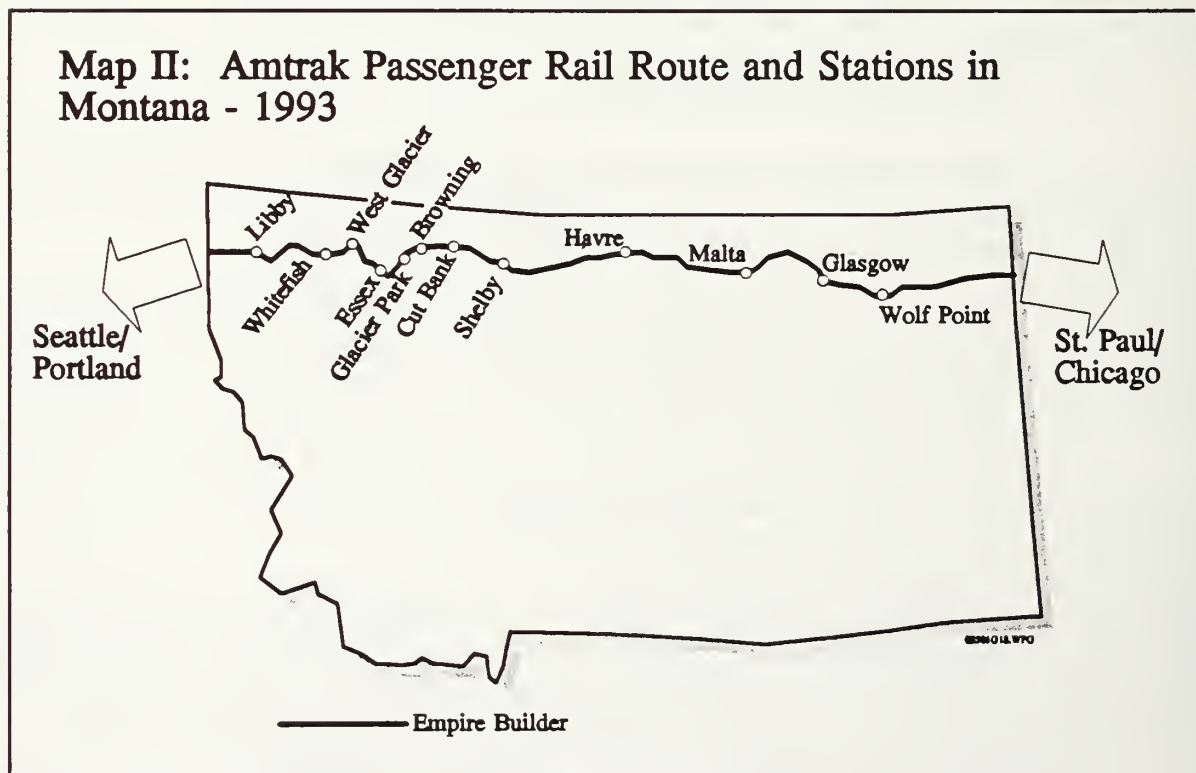
Improving access to intermodal facilities and stations. Intermodal shipments are expected to increase. High volume stations will generate and attract truck trips which need to be accommodated on the highway system. To address these needs, it will be necessary to consider the roadway connections irrespective of functional classification and jurisdictional responsibility to ensure effective intermodal connections.

E. PASSENGER RAIL IN MONTANA

1. Passenger Rail Today

Passenger rail service in Montana is provided by the National Railroad Passenger Corporation (Amtrak) across the northern portion of the state. The Amtrak service, the "Empire Builder" originates in Chicago, Illinois and parallels U.S. highway 2 through most of the state and terminates in Seattle. There are 12 stops in Montana, each with daily east-bound and west-bound service. Exhibit IV-38, shows the passenger rail system today in Montana. In December of 1994 Amtrak announced plans to reduce this service to 4 days a week in early 1995.

Exhibit IV-38
Amtrak Passenger Rail Route and Stations in Montana - 1993



There are Amtrak stations at Browning, Belton-West Glacier, Cut Bank, Essex, Glasgow, Glacier Park, Havre, Libby, Malta, Shelby, Whitefish, and Wolf Point. There is no agent at Browning and Essex is a flag stop. Belton-West Glacier station is owned by the National Park Service, Whitefish station is owned by

Stumptown Historical Society of Whitefish, and the other stations are owned by Burlington Northern.

In the ten years from 1984 through 1993 Amtrak ridership in Montana increased by 14 percent. Ridership has risen markedly at Whitefish, East Glacier Park, Essex, and Belton-West Glacier stations. This is due to increased use of rail to access summer and winter tourist destinations and the growth in population in these areas. Stations further east, at Havre, Malta, Glasgow, and Wolf Point have experienced an overall decrease in boardings and deboardings.

Amtrak's marketing affecting Montana focusses less on competing with air, highway and bus travel, and more on the discretionary travel and tourism markets. This is likely to continue. For communities in northeastern Montana passenger rail provides the only east-west travel option other than the private automobile.

2. Ridership Trends

Amtrak ridership, measured as a total of boardings and deboardings, increased statewide between 1984 and 1993 by nearly 17,000, a growth of some 14 percent. While statewide ridership has been fairly stable, there have been large changes at the individual stations as shown in Exhibit IV-39

Over the past five years, 1989 to 1993, Amtrak ridership in Montana increased faster than during the preceding five year period, 1984 to 1988 period. There was a statewide ridership decrease of 3 percent between 1984 and 1989, whereas there was a 17 percent increase between 1989 and 1993.

The majority of the ridership increase is through the Whitefish station and other stations serving the Glacier National Park area (East Glacier Park, Essex, and Belton-West Glacier). This is illustrated in Exhibit IV-40. Boardings and deboardings at Whitefish and the Glacier National Park associated stations increased by 30,660 between 1984 and 1993. The largest portion was the growth in ridership at Whitefish, from 38,745 in 1984, to 63,391 passengers in 1993, this accounted for more than 100 percent of the state's total ridership increase. Excluding Whitefish and Glacier National Park, there was a decrease of 13,578 boardings and deboardings statewide between 1984 and 1993.

There is considerable seasonal variation in rail ridership in Montana. It peaks during the July and August, tourism and travel months. However, variations exist at particular stations. For example, Whitefish is a tourism and recreation destination during the winter months due to its proximity to the Big Mountain ski area. Similarly, the East Glacier Park, Essex, and Belton-West Glacier stops attract the most traffic during summer months. Overall, the lowest statewide ridership is usually recorded in October and April (National Railroad Passenger Corporation, boardings and deboardings in Montana).

DISCUSSION DRAFT

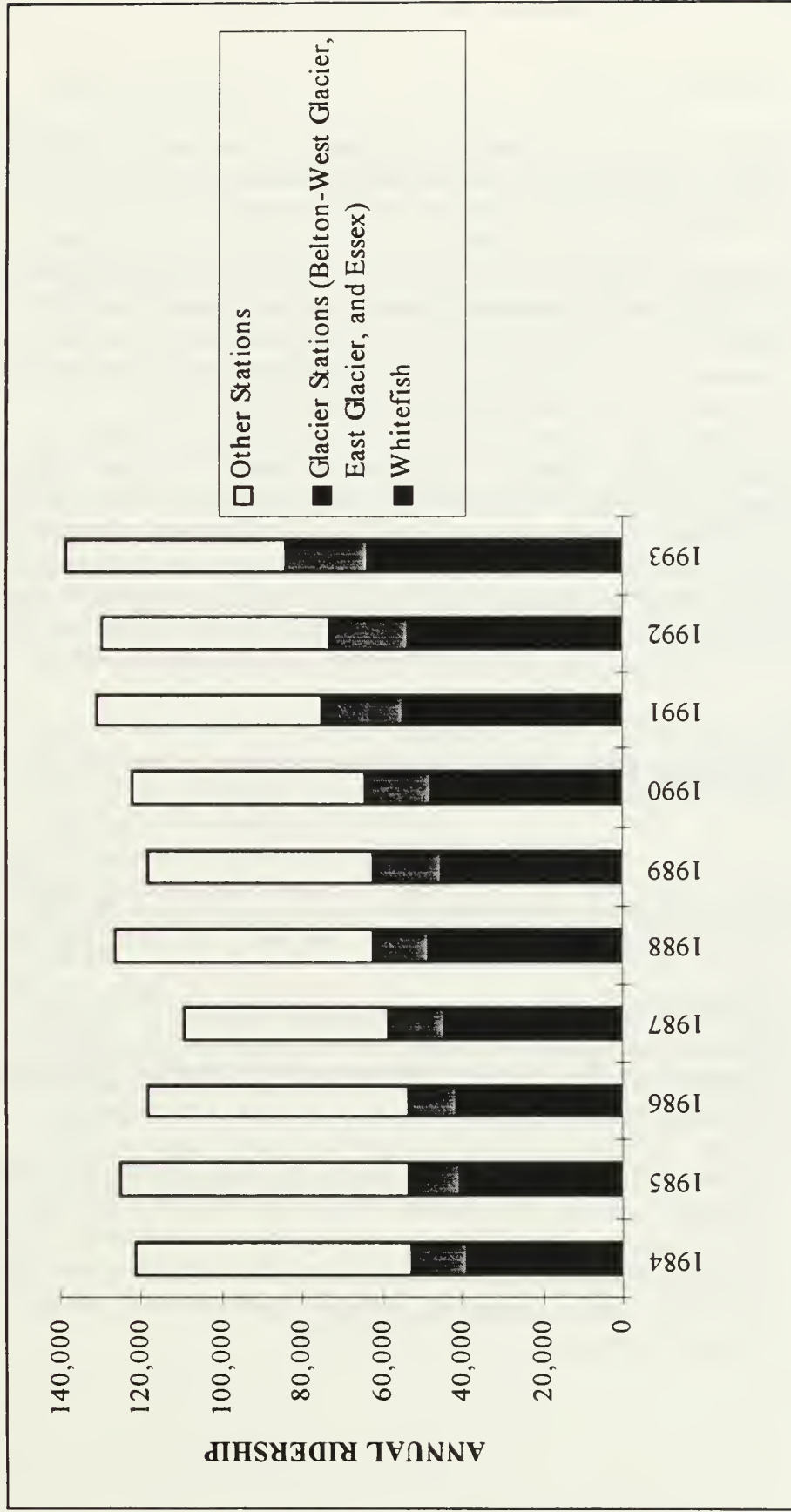
Exhibit IV-39 - Montana Passenger Rail (Amtrak Empire Builder)
 Fiscal Year Ridership 1984-1993

Station	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1984-1993 Change	1984-1993 % Change
Browning	1,795	1,779	2,227	2,135	3,383	1,222	1,505	922	1,962	1,511	-284	-15.8
Belton - West Glacier	3,952	3,920	3,781	4,211	3,908	4,105	3,898	5,335	3,908	5,616	1,664	42.1
Cut Bank	3,437	3,682	3,167	3,557	2,650	2,647	2,509	2,315	2,433	1,962	-1,475	-42.9
Essex	no service	no service	648	1,457	2,189	2,101	2,575	2,221	2,788	2,749	2,749	100.0
Glasgow	8,651	8,447	7,687	6,851	6,617	6,212	6,089	6,412	6,395	5,755	-2,896	-33.5
Glacier Park	10,375	8,825	7,629	8,108	7,484	11,199	10,054	13,259	12,177	11,976	1,601	15.4
Havre	22,087	20,487	19,072	17,419	18,650	16,614	17,441	17,570	16,560	15,734	-6,353	-28.8
Libby	4,484	4,131	4,292	4,728	4,286	4,009	3,686	3,440	3,617	4,072	-412	-9.2
Malta	4,424	4,149	3,837	3,381	3,332	3,327	3,547	3,425	3,202	3,109	-1,315	-29.7
Shelby	11,078	11,331	12,225	11,709	13,267	12,407	13,773	13,183	13,609	14,282	3,204	28.9
Whitefish	38,745	40,418	41,168	44,788	48,485	44,995	47,770	54,532	53,546	63,391	24,646	63.6
Wolf Point	12,475	18,404	12,791	11,312	12,156	9,470	9,194	8,612	8,630	8,428	-4,047	-32.4
State Total	121,503	125,573	118,524	119,656	126,407	118,308	122,041	131,226	129,867	138,585	17,082	14.1

Source: National Railroad Passenger Corporation, Government Affairs Department.

DISCUSSION DRAFT

Exhibit IV-40
Montana Passenger Rail Ridership 1984 to 1993



Source: National Railroad Passenger Corporation, Government Affairs Department

3. Level of Service

The availability of passenger rail service, intermodal connections, and the frequency of the service, are used as performance measures to describe the level of passenger rail service available to Montanans.

Frequency of service. Amtrak provides daily east-bound and west-bound service to each of the 12 Montana stations. With the exception of Libby, all stops are between 6:50 a.m. and 9:40 p.m. (Amtrak Schedule, May 1994). Libby, however, has a scheduled west-bound stop at 11:25 p.m. and an east-bound stop at 4:48 a.m. both times that are not conducive to travel.

Availability of Service. Passenger rail serves the less populated areas of Montana. Exhibit IV-41, shows the proportion of Montana's population that lives in a county with an Amtrak station, or in a neighboring county. By this measure, since 1980 there has been little change in the proportion of the state's population with access to passenger rail, it has remained at approximately 23 percent. Assuming the same Amtrak service levels over the next twenty years, there will be no change in the proportion of Montana's population served.

Exhibit IV-41
Montana Population Served by Amtrak, 1980 to 2015

	1980	1990	1993	2015
State Population	786,690	799,065	827,300	956,200
Population Served	178,934	182,487	187,800	214,900
Percent of Population Served	22.8	22.8	22.7	22.5

Sources: U.S. Census of Population and Housing. Forecast data from National Planning Association Data Services, National Railroad Passenger Corporation.

Intermodal connections. The ability to make intermodal connections is an important element of the overall level of service for a given mode. For most Montanans the automobile is the only option for connecting with passenger rail. There are limited options for using intercity bus service to access stations in Great Falls and Shelby, however, schedule coordination is difficult for the bus companies because of Amtrak's schedule.

4. Future Conditions

The future level of demand for passenger rail services in Montana will depend upon population growth, propensity to travel to Amtrak destinations, and the attractiveness of passenger rail in comparison to other modes. The level of passenger rail service will be determined by decisions made by Amtrak, many of which will be affected by the fact that Montana destinations are a small proportion of the east-west travel market across the northern United States. In fact, in December of 1994 Amtrak announced plans to reduce this service to 4 days a week in early 1995.

Demand for passenger rail. Amtrak does not perform forecasts of travel demand for Montana. Therefore, a simple forecasting technique based on population forecasts and historic trends in ridership per capita was developed to forecast ridership per station for 2015. Two alternative forecasting approaches were developed, the more conservative forecasts are included in this section. These forecasts apply 1993 ridership per capita rates to a forecast 2015 population. (The forecasting methodology and assumptions are described in Appendix D). The results are presented in Exhibit IV-42.

Statewide, Amtrak ridership is forecast to grow 16.6 percent statewide by 2015, an increase in ridership of 23,000. However, almost 19,000 of this increase is forecast for Whitefish alone. Ridership at many stations in eastern Montana is expected to be constant or decline.

The forecasts assume a continuation in the current levels of rail use per person at the existing level of service. They reflect the current use of rail primarily for tourism.

Service provision, supply. Amtrak is a federally subsidized, nonprofit corporation that has provided intercity passenger service within and through Montana since it was created by Congress in 1971. Future service levels in Montana will be affected by national policy decisions concerning Amtrak funding and the organizational and business decisions made by Amtrak for serving the east-west interstate passenger travel market.

Exhibit IV-42
Projected Passenger Rail Ridership Forecasts in Montana
(Amtrak Empire Builder), 1993 to 2015

Station	1993 Ridership	2015 Ridership	1993 - 2015 Change	1993 - 2015 Percent Change
Browning	1511	1658	147	9.7
Belton	5616	7263	1647	29.3
Cut Bank	1962	2153	191	9.7
Essex	2749	3555	806	29.3
Glasgow	5755	5275	480	29.3
Glacier Park	11976	13144	1168	9.7
Havre	15734	16203	469	3.0
Libby	4072	4400	328	8.1
Malta	3109	3164	55	1.8
Shelby	14282	14177	-105	-0.7
Whitefish	63391	81984	18593	29.3
Wolf Point	8428	8513	85	1.0
State	138585	161590	23005	16.6

Source: Calculated by Dye Management Group, Inc. based on data from the National Railroad Passenger Corporation and National Planning Association Data Services.

The forecasts indicate that many of the stations in eastern Montana will experience a reduction in use over the next twenty years. This will make service to these stations less economical for Amtrak and presents a cause for concern. In contrast, the stations that are expected to experience the greatest passenger growth will become larger trip generators creating the need for improved intermodal connections through automobile access, parking, signage, coordination with local transit and intercity bus and in some cases the improvement to station facilities.

There is citizen interest in having Amtrak service available in the state's major population centers which have not had passenger rail service for 15 years. Montana used to have passenger rail along a southern route, 1979 was the last year that passenger rail was available in the southern portion of the state on the North Coast Hiawatha. While fifteen years ago ridership on the southern route

was slightly lower than the northern Empire Builder, it was determined that service consolidation met Amtrak's overall business needs. Therefore, Amtrak stopped serving the route and increased the frequency of service on the northern route to daily east-bound and west-bound service. Amtrak's route consolidation resulted in lost service to Glendive, Miles City, Forsyth, Billings, Livingston, Bozeman, Butte, Deer Lodge, Missoula, and Paradise.

Reintroduction of Amtrak on a southern route is of interest to many of the communities on this route and several studies have investigated the feasibility. Any decisions about future service will not be based on serving Montana because the primary market served is passengers travelling between Chicago and Washington and Oregon states. An additional route through Montana would serve the state well but do little to increase the market served in Chicago or on the west coast. In addition, there is a concern that additional service would adversely impact service provided by the Empire Builder. When service through Montana was consolidated in 1979 the southern Montana communities had greater access to alternative modes of travel such as the interstate highway system, interstate bus service, and airline services. These alternate modes are not readily available in communities along the northern route.

There are large financial constraints to the reintroduction of Amtrak service. For example, Amtrak analysis determined that operation of a southern route would increase the annual federal operating subsidy to Amtrak between \$12.6 and \$15.3 million (Amtrak, July 1992). This estimate does not include any capital improvements that might be required to the track, stations, and other facilities.

5. Planning For Passenger Rail In Montana

Based on the analysis of the passenger rail mode in Montana, following are the key threats and opportunities addressed in TranPlan 21.

Preserving existing service levels. Ridership trends indicate that a number of the communities currently served will continue to have low and/or decreasing numbers of boardings and deboardings. Actions which can increase the utilization of these stations offer the most feasible approach for preserving service. These include:

- Promoting the use of Amtrak through increasing awareness of the service and publicity materials.
- Improving intermodal connectivity through schedule coordination, signage, and the provision of public transportation to Amtrak stations.
- Improving stations and associated facilities such as parking.

- Ensuring that Montana's interests are represented in any decision-making affecting changes to passenger rail service in Montana.

Addressing the impacts of ridership growth. Recent trends and forecast results indicate that Whitefish and the other stations serving Glacier National Park will experience increased ridership. This is due to population growth and increased tourism-related travel. Improved performance on Amtrak's network could further increase the attractiveness of traveling to Montana by train. Actions which ensure adequate capacity, high quality terminals, and good intermodal connections will enhance the use of this mode and can help reduce the forecast growth in vehicular traffic to the area. These include:

- Ensuring that high traffic stations function as intermodal facilities.
- Addressing the local traffic impacts from boardings and deboardings at high growth stations.
- Coordinating public transportation schedules and services with Amtrak schedules.

Encouraging the use of passenger rail for visitors from out of state and by Montanans. Travel demand for all modes in Montana is highly seasonal. Encouraging visitors to arrive by rail could contribute to a reduction in the rate of highway traffic growth in northwest Montana. Actions that could support this include:

- Promoting Amtrak as a travel option for visiting Glacier National Park.
- Improving stations and intermodal connections to enhance the attractiveness of rail and reduce the need to rent a car to visit the Park.
- Coordinating with the National Park Service and their plans for traffic management in the Park.

Representing Montana's interests in national decisions affecting passenger rail service within and through Montana. Any decision-making concerning changes to existing service levels or the introduction of new service to Montana will be made at the national level. There is increased interest nationally in passenger rail that could provide opportunities for Montana over the next twenty years. Actions to ensure that Montana's interests are addressed in any decision-making about new passenger rail service include:

- Ensuring Montana interests are addressed in national decision-making.

- Monitoring closely Amtrak's and other agencies plans for passenger rail that could benefit Montana.

F. MONTANA PIPELINES

1. Pipelines as a Mode of Transportation

Pipelines are like other modes of transportation in that they move commodities between origins and destinations. As with other modes, most commodities shipped by pipeline undergo value added processing prior to final consumption. An important difference is that there are no vehicles needed to convey freight. In the case of solids pipelines there is usually a transporting medium present such as water which functions similar to a vehicle. Also pipelines are a fully automated transport mode. This results in a mode where transportation can be continuous and uninterrupted. Pipeline movements are not dependent upon all the variables associated with the movement of vehicles in the other modes.

In many respects pipeline transportation has characteristics similar to electric utility transmissions. The principal difference is that pipelines carry goods that have identifiable volume and weight.

Pipeline capacity is dependent upon different variables than other modes. The principal factors are the diameter of the line, the compressibility of the commodity, and pressure and temperature conditions both inside and outside the pipe. Thus the capacity of a specific route in the pipeline system will vary by commodity characteristics and time of year.

Pipeline usage is typically measured in volume rather than weight which is the common measurement in other modes. Petroleum products are measured in barrels and the other common commodity, natural gas, is measured in millions of cubic feet. Conversion of the volume measurements to weight is dependent upon the compressibility, pressure, and temperature conditions noted before as well as the nature of the unique characteristics of each sub-classification of the products. The following provides some approximate conversions that are used under theoretically ideal conditions within pipelines and under average ambient atmospheric conditions:

- 1,000 barrels of typical crude (Montana Sour) products = 159.537 tons @ 23.6 American Petroleum Institute specific gravity measure (API).

- 1,000 barrels of typical refined products = 137.587 tons (average of common refined liquids such as winter gasoline, summer gasoline, no. 6 diesel, and avgas @ appropriate average API).
- 1 million cubic feet = 22.4 tons of natural gas (pure methane) under constant ideal conditions. (Source: Oak Ridge National Laboratory. Center for Transportation Analysis)

Nationally, pipelines are used to transport a variety of bulk commodities grouped into whether their basic states are solids, liquids, or gases. Solids, such as coal slurry and limestone, are usually transported using water or some other liquid. At present there are no pipelines shipping solids in Montana.

2. Pipelines in Montana

Liquids and gas pipelines comprise the whole of Montana's pipeline transportation system. The principal liquid commodities are crude and refined oil. Crude includes a range of concentrations and densities while refined petroleum products are more consist in terms of the densities carried. Natural gas comprises shipments transported in a gaseous state.

In the case of commodities other than natural gas, pipelines usually serve as a transportation mode between the location where the gas or liquid is first produced or mined and a location where it undergoes a value added secondary processing. Natural gas which typically is collected in subsurface production fields and transmitted through a series of distribution lines, municipal carriers, and master metered systems to a final consumer. Master meter systems refer distribution systems covering defined sub-municipal areas such as housing and industrial complexes. Very frequently, gas is held in storage during its transmission. Thus the non-gas pipeline systems can be characterized as serving a limited number of origins and destinations while natural gas serves a limited number of origins and a very large number of destinations.

The overall pipeline system in Montana can be subdivided into trunk and grid or gathering systems. Trunk lines refer to transmission of commodities from source areas to storage or to secondary processing. Grid systems refer to distribution to a large number of discrete locations. Gathering systems refer to lower capacity lines collecting the commodity over a broad area. Typically, natural gas transportation involves both trunk and grid systems. Oil pipelines carrier may specialize in providing either type of service or alternatively may operate both trunk and grid lines. Except for some local deliveries, there are no intermodal connections utilized in the pipeline system. Products being shipped by pipeline can conceivably be hauled by rail or truck. However, other modes require that the products be placed into discrete containers rather than the continuous flow of

transport of pipelines. This would entail additional costs which may make their shipment cost prohibitive.

3. Existing Operations

a. Operating and Regulatory Framework

Except for municipally owned natural gas lines, most pipelines are investor owned. Privately owned lines are divided between those which are common carriers and those providing proprietary service. The latter usually have a corporate affiliation with an energy industry company.

All pipelines are subject to a variety of federal safety and environmental regulations which are enforced by both federal and state agencies. The transportation aspects of interstate pipelines are regulated by the Federal Energy Regulatory Commission. Intrastate pipeline shipments in Montana are regulated by the Department of Natural Resources and Conservation, Oil and Gas Conservation Division.

Since pipeline regulation focuses on natural gas, data collection for that commodity is readily available. Information regarding movements of petroleum and other products is more proprietary in nature and is usually inferred from data on production.

Pipelines' share of freight movements in Montana is comparable to the nationwide average of 20 percent. (Statistical Abstract of the U.S.) This share has decreased over the past decade, having experienced a high of about 25 percent in the early 1980s. This share should be taken as only a rough estimate based on the qualified nature of converting pipeline volumes to weights as was discussed previously.

The petroleum transportation system of Montana is based on the gathering of crude and its trunk transportation to processing centers which are mostly located out of state. In 1992, about 18.5 billion barrels were transported within the state of which most was crude. (Montana Oil and Gas Conservation Division) The natural gas transportation system of Montana is based initially on collection at a variety of fields within the state as well as the importation and transshipment of Alberta gas. The product is shipped either directly out of state or is sent to local distribution companies.

b. Regional, Local and Interstate Characteristics

There are several areas of Montana that have significant networks of pipelines. The following describes these areas and their commodity and transportation characteristics. This information is compiled from maps produced by the Montana Board of Oil and Gas Conservation. The Board includes the lines in the Blackfeet, Sweetgrass, and Bearpaw fields within their Northern District and all others in the Southern District. The source areas are listed approximately in rank order of the total pipeline mileage associated with each area. It should be noted that Montana serves as an important state for the transit of pipeline products, particularly gas, from Alberta and Saskatchewan fields to elsewhere in the U.S.

- Blackfeet and Sweetgrass to Wyoming Corridor. Oil and gas source fields for this corridor extend along the Canadian border from Cut Bank east to Hill County. This is a principal corridor for inbound shipments of Canadian products and onward haul to Wyoming and from there to locations in the western states. Carriers include Conoco, Williston Basin, and Montana Power.
- Poplar Corridor. This is located in the far northeast corner of the state and is a major transshipment area of oil from Saskatchewan and from Montana sources to the central states through the Dakotas. Pipelines trend from the northwest to the southeast direction in the area and also southward toward Wyoming and South Dakota. Principal carriers include Texaco and Wascana.
- Bowdoin-Baker corridor. Also located in the northeastern part of the state and also trending northwest to southeast, this corridor primarily features natural gas production, storage, and transshipment of nearby Alberta gas. This area includes the largest single natural gas field and largest storage area in the U.S. Principal carriers are Northern Border and Northern Natural. Principal destinations are in the central states.
- Elk Basin area. This oil and gas is located in the south central portion of the state and is marked by a dispersed network of gathering and trunk lines. Some lines serve local source and consumption areas while others connect with the locations to the north noted previously. Carriers include Montana Power, KN Energy, and Conoco.
- Powder River corridors. These are oil and gas source areas toward the southeastern part of the state and are associated with

the neighboring Powder River reserves of Wyoming. They provide product both to Montana and to neighboring portions of the central and Rocky Mountain states.

c. Volumes of Movement

Montana has a net inbound movement of natural gas. As noted previously, a principal role of pipelines in Montana is to provide a bridge for Canadian shipments. This through movement plus local consumption is reflected in Exhibit IV-43.

Exhibit IV-43
Montana Interstate Gas Shipments by Pipeline (1991)

State/Province	From Montana	To Montana
Alberta/Saskatchewan	0	1203
North Dakota	1223	223
South Dakota	53	0
Wyoming	22	130
TOTAL	1,298	1,556

Source: U.S. Department of Energy. Energy Information Administration. Gas Supplies of Interstate Natural Gas Pipeline Companies. (1992)

Exhibit IV-44 highlights operations of the principal carriers in the state. Although the reserve to production ratios vary between carriers, the statewide average is about 20 to 1; that is there are about 20 units in reserve for every unit transmitted. This ratio has reduced very slightly over the past 5-7 years.

Exhibit IV-44

Summary of Principal Montana Gas Pipelines (1991)

Carrier	Reserves (mcf)	Production (mcf)	Configuration	Service Type
Williston Basin	257	6	Trunk/Grid	Outbound to Central U.S.
KN Energy	170	4	Grid	Transit of Canadian Gas
Northern Natural	164	21	Trunk/Grid	Transit of Canadian Gas

Note: mcf = million cubic feet

Source: U.S. Department of Energy. Energy Information Administration. Capacity and Service on the Interstate Natural Gas Pipeline System. (1992)

Most consumption within Montana of pipeline products is for residential uses as opposed to industrial uses. While the region has been growing overall, the per capita consumption has decreased slightly. This further indicates that pipeline capacity is sufficient.

d. Planning issues

Issues of concern affecting specific pipelines usually involve land use, safety, and environmental considerations. Land use issues involve access to and across rights-of-way. Both safety and environmental considerations frequently are concerned with locations at compressing stations and where interconnections between pipelines or between pipelines and processing areas occur. At these locations the potential for venting, spillage, or other accidents is more problematic than along the trunk portion of the pipeline corridor.

No inventory exists as to the width of pipeline rights-of-way. It is reasonably likely that higher functions of pipelines such as trunk lines have a wider right-of-way than local distribution and gathering lines since trunk links are usually of greater diameter. An inventory will reveal whether pipeline conditions can be readily utilized by other modes and whether adequate access is available to and from other modal corridors. As noted in a later section the transportation potential of pipelines is maximized when the options for use of the rights-of-way are maximized. An existing deficiency is that there is a lack of information in this regard.

4. Future Conditions

a. Conventional Pipelines

Montana is both a major transit area, supplier and reserve of pipeline products. Depletion of in-state reserves of natural gas is projected by the Federal Energy Regulatory Commission to be about 23 percent over the life of the Plan. This indicates excess capacity of pipelines is likely to continue.

There are no specific areas where trunk or grid capacity deficiencies are present or projected to occur. Some localized increases in capacity may be necessary if specific industries alter their energy consumption patterns. This will be the case if the economics of establishing gas fired plants improves as opposed to using the currently low cost coal firing technique.

It is expected that there will be some increase in capacity provided on interstate routes to meet demands in other regions. Canada and Montana are competitive with other source areas in meeting those demands and thus the provision of additional capacity is primarily a function of ensuring that Canadian and Montana based products are effectively marketed to growth regions. For natural gas, it is expected that the Alberta to California corridor will be developed during the planning horizon. This is also known as the Altamont Corridor and total increased capacity is expected to be about 700 million cubic feet.

Increased tax credits may become available to deep gas fields in the Rockies. If this occurs, some pipeline development may occur toward the west of the existing Alberta to Wyoming corridor.

b. Alternative Pipeline Uses

There remains the potential for moving solid objects through pipelines. Depending upon the commodity in question, such goods could be carried either by a transporting medium such as water or encased within a capsule and moved by pneumatic pressure or by linear induction. Prototypes and small-scale operations of these have been demonstrated to be technically feasible. Analysis of its design and economic applicability has been undertaken as part of national transportation planning research.

There are no known technological barriers to providing this mode of transportation. However, there are no specific "off-the-shelf" techniques available for any particular application. Implementation of this type of

transportation would require establishment of a design and manufacturing industry geared toward the mode.

Realistic application of solids pipelines within the time frame of the Plan need be limited by these considerations and also by the types of commodities available for such transportation within Montana. Current technical applications to solids movement in tubes or pipelines is limited to bulk goods. In the case of bulk goods as with liquids or gas the flow is continuous between origins and destinations. The shipper and consignee are not concerned as to which specific unit of material completes the trip between origin and destination as long as the total amount ordered is delivered. In the case of value added items such as manufactured products, shipments are increasingly more specific to particular patterns of discrete origins and destinations. For movement through pipelines such transportation would either be limited to dedicated routes between shippers and receivers or must await technological developments allowing automated interchanges along an integrated solids pipeline system.

Further development of the pipeline mode for such commodities is limited by being economically prohibitive. Under current economic conditions it is far more cost effective to move goods by any of the conventionally available modes than to invest in creation of altogether new techniques.

c. Transportation Implications of Montana's Pipelines

As noted at the beginning of this section, pipelines are an integral part of Montana's transportation system but have unique characteristics making them different from the facilities of other modes. The chief differences are that pipelines provide continuous movement of freight compared to the discrete movement offered by vehicles. Also pipelines are currently limited to specific commodities, namely oil and gas.

Based on the information provided in this section, the following conclusions can be made about pipelines effects on the state's transportation system:

Commodities served are currently limited to oil and gas and it is reasonably certain that no other materials will be shipped in significant quantities during the life of the Plan. While it is physically possible to ship other commodities via pipeline, it is not economically viable to do so.

The commodities shipped via pipeline are not readily susceptible to being hauled by other modes in large quantities or over long distances. The physical possibility for doing so does exist but it is also not economically

viable. There is adequate capacity in the pipeline system to accommodate current and expected demands. In the event that the state's pipeline system does not operate for any reason, then the rail and truck modes will need to serve the oil and gas market. There is inadequate capacity within those modes to accommodate such additional demand. However, the likelihood of this occurring is remote.

Montana is a major transit state for pipeline shipments between Canada and the North Central States. If there is to be any shift towards other modes it is likely to affect east-west corridors along the northern tier of the state as well as the northward extensions of these corridors into Alberta and Saskatchewan.

The pipeline system is located within several specific corridors. The use by other modes. An inventory of the rights-of-way would be needed to determine that usefulness.

G. REFERENCES

1. Highways and Bridges

United States Department of Transportation, Federal Highway Administration. *Highway Statistics, 1992*. (Washington, D.C.: 1993).

Montana Department of Transportation. *Report to the 53 Legislature*. (Helena, MT: January, 1993).

2. Freight Rail

1991 Montana rail traffic statistics. Compiled by Burlington Northern and the Montana Department of Transportation. (Helena, MT: 1991).

1993 Montana State Rail Plan Update. Montana Department of Transportation. (Helena, MT: 1993).

Accident statistics involving rail. Federal Railroad Administration, Office of Public Affairs. (Washington, DC: August, 1994).

Montana Agricultural Statistics Service.

U.S. Bureau of Economic Analysis.

3. Passenger Rail

Montana Rail Plan. Montana Department of Transportation. (Helena, MT: August, 1979).

Amtrak Ridership Statistics (1987-1993). National Railroad Passenger Corporation (Washington, D.C.: 1994).

National Association of Rail Passengers Newsletter. July, 1992.

Evaluation of Service to Areas Not Presently Served. National Railroad Passenger Corporation. (Washington, D.C.: July, 1992).

Amtrak National Timetable, Spring/Summer 1994. National Railroad Passenger Corporation. (Washington, D.C.: May, 1994)

State of Montana Amtrak Facts (1984-1993). National Railroad Passenger Corporation, Government Affairs Department. (Washington, D.C.)

Communication with National Railroad Passenger Corporation, June-August, 1994. (Director of State and Local Affairs).

U.S. Census of Population and Housing. U.S. Department of Commerce, Census Bureau (1980 and 1990 population figures).

National Planning Association Data Services.

4. Air Transportation

1990 5010 Forms. Federal Aviation Administration.

Montana Airport Authorities and Managers. Miscellaneous data and telephone conversations, July-August, 1994.

1989 Montana State Aviation System Plan. Montana Department of Transportation, Aeronautics Division. (Helena, MT: 1989).

Federal Aviation Administration. 1990-1992 Terminal Area Forecasts.

1993 Montana State Aviation System Plan Update. Montana Department of Transportation, Aeronautics Division. (Helena, MT: 1993).

Terminal Area Forecasts (1990-2010). Federal Aviation Administration.

Enplanement and Cargo data. Big Sky Airlines (Billings, MT: August, 1994).

5. Bus Transportation

1990 Census Transportation Planning Package (CTPP). U.S. Department of Commerce, Census Bureau. (Washington, D.C.: 1990).

Greyhound Lines. (Dallas, TX: September, 1994).

United States General Accounting Office, 1992 Intercity Bus Service Declines. (Washington, D.C.: June, 1992).

National Timetable. National Railroad Passenger Corporation (Amtrak). (Washington, D.C.: Spring/Summer, 1994).

Performance Report by Organization. Montana Department of Transportation. (Helena, MT: 1994).

Power River Transportation. (Gillette, WY: 1994).

Quarterly Report, Section 18 History Records. Montana Department of Transportation. (Helena, MT: 1994).

Russell's National Motorcoach Guide. Russell's Guides, Inc. (Cedar Rapids, IA: April 7, 1994).

Public Transportation in Montana. Montana Department of Transportation, Transportation Planning Division. (Helena, MT: December, 1993).

Montana Department of Transportation, Transportation Planning Division. July-September, 1994.

6. Montana Pipelines

Montana. Department of Natural Resources and Conservation. Oil and Gas Conservation Division. (1992) Annual Review

U.S. Department of Transportation. Research and Special Programs Administration. (1994) Tube Transportation.

U.S. Department of Energy. Office of Oil and Gas. Energy Information Administration. (1992) Capacity and Service on the Interstate Natural Gas Pipeline System.

U.S. Department of Energy. Office of Oil and Gas. Energy Information Administration. (1992) Gas Supplies of Interstate Natural Gas Pipelines.

V. FINANCING TRANPLAN 21



This section identifies the funding sources, evaluates the prospects for future funding, and evaluates the key transportation finance issues that will affect the implementation of TranPlan 21. The following are considered in turn:

- Current transportation funding in Montana.
- Future transportation funding in Montana.
- Finance mechanisms for implementing TranPlan 21.

The financial data presented in this section are drawn from reports provided by the Montana Department of Transportation (MDT). Data used were the most current available at the time of this document's preparation. In practice, Montana's transportation finances are subject to continuous fluctuation. For this reason, the MDT's transportation revenues and expenditures are likely to vary in future periods from the balances reported in this document.

A. CURRENT TRANSPORTATION FUNDING PROBLEMS IN MONTANA

This section evaluates current transportation funding in Montana. Included is an inventory of the MDT's major transportation funding programs, an evaluation of the revenues that finance these programs, and identification of MDT roadway improvement and preservation expenditures. For each program the purposes for which program funds can be used, the matching requirements, and the level of program funding for fiscal year 1995 are described.

The Montana Department of Transportation funds highway construction, improvement, and maintenance through revenues received from the federal government and by revenues collected directly by Montana. Exhibit V-1 lists the actual funds that are programmed for expenditure in fiscal year 1995 for each major program and by funding source. It is important to note that these are subject to year-to-year fluctuations.

Exhibit V-1
Highway Improvement and Maintenance Fund Allocation
Fiscal Year 1994 (\$ in Millions)

		Federal	State
ISTEA			
Interstate		42.4	
National Highway System		36.0	
Bridge Program		9.95	
Surface Transportation Program			
Non-NHS Primary	33.8		
Secondary	13.1		
Urban	4.5		
Surface Transportation Program Total		51.4	
Safety and Hazard Elimination		5.4	
Transportation Enhancements		5.4	
Congestion Mitigation and Air Quality Improvement Program		4.8	
ISTEA Total		155.35	
State Funded Match @ 87 percent			18.8
Reconstruction Trust Fund			20.0
Maintenance			59.4
TOTAL		155.35	98.20

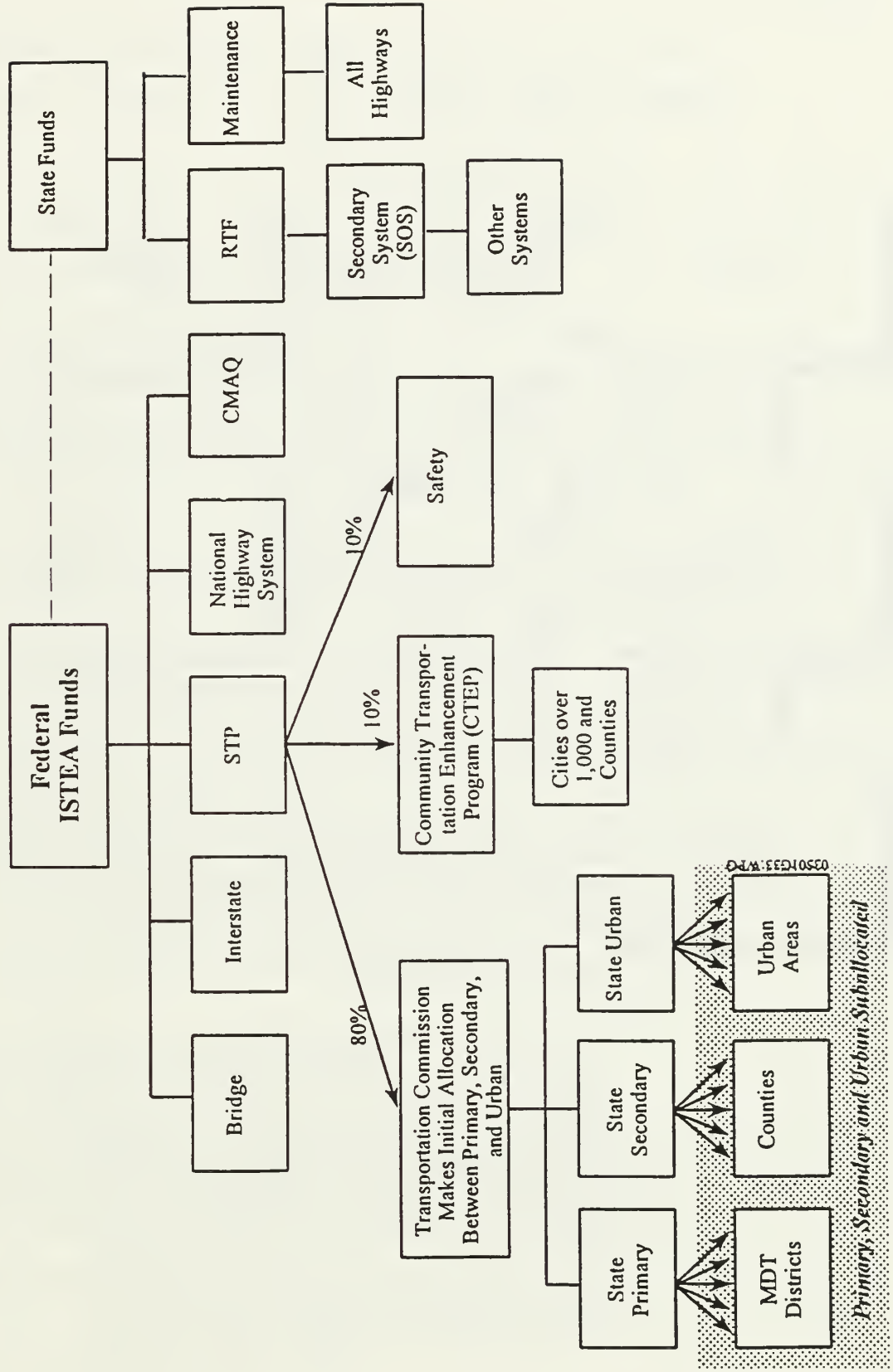
Source: Montana Department of Transportation, Statewide Transportation Improvement Program, 1995-1997.

1. Federal Funds, ISTEA

Under ISTEA, Montana receives federal revenues from the U.S. Department of Transportation for use in highway construction, improvement, and Interstate maintenance. The Congress passed ISTEA into law in December 1991 and authorized ISTEA to provide transportation finance assistance to Montana and other states through fiscal year 1997.

An overview of the different state and funding programs in Montana is shown in Exhibit V-2.

Exhibit V-2: Allocation and Suballocation of Federal ISTEA Funds in Montana



ISTEA provides funding for roadway improvement and maintenance funding under the following programs:

- National Highway System (NHS).
- Interstate Maintenance (IM).
- Bridge Rehabilitation and Reconstruction (BR).
- Surface Transportation Program (STP) which includes:
 - Safety and Hazard Elimination (STPHS and STPRP), and
 - Transportation Enhancements (STPE).
- Congestion Mitigation and Air Quality Program(CMAQ).

Montana's ISTEA program allocation for fiscal year 1994 was \$144.6 million. By law, Montana must match the funds it receives from the federal government under ISTEA. For the \$144.6 million Montana budget under ISTEA in fiscal year 1994, Montana will match with just under \$14 million of its own revenues.

The Congress has never fully funded ISTEA. Full funding would have given Montana about \$190 million in federal transportation obligation authority in fiscal year 1995. Actual obligation authority equalled only two-thirds of the full funding level.

Federal law allows Montana flexibility to transfer certain funds between ISTEA programs. Exhibit V-3 summarizes the rules for making transfers between the ISTEA categories.

The ISTEA funds that will be available to the MDT for implementing TranPlan 21 are discussed in turn below. Exhibit V-4 summarizes funding and federal matching requirements for each of these programs and Exhibit V-5 summarizes the purposes for which funds from these programs can be used.

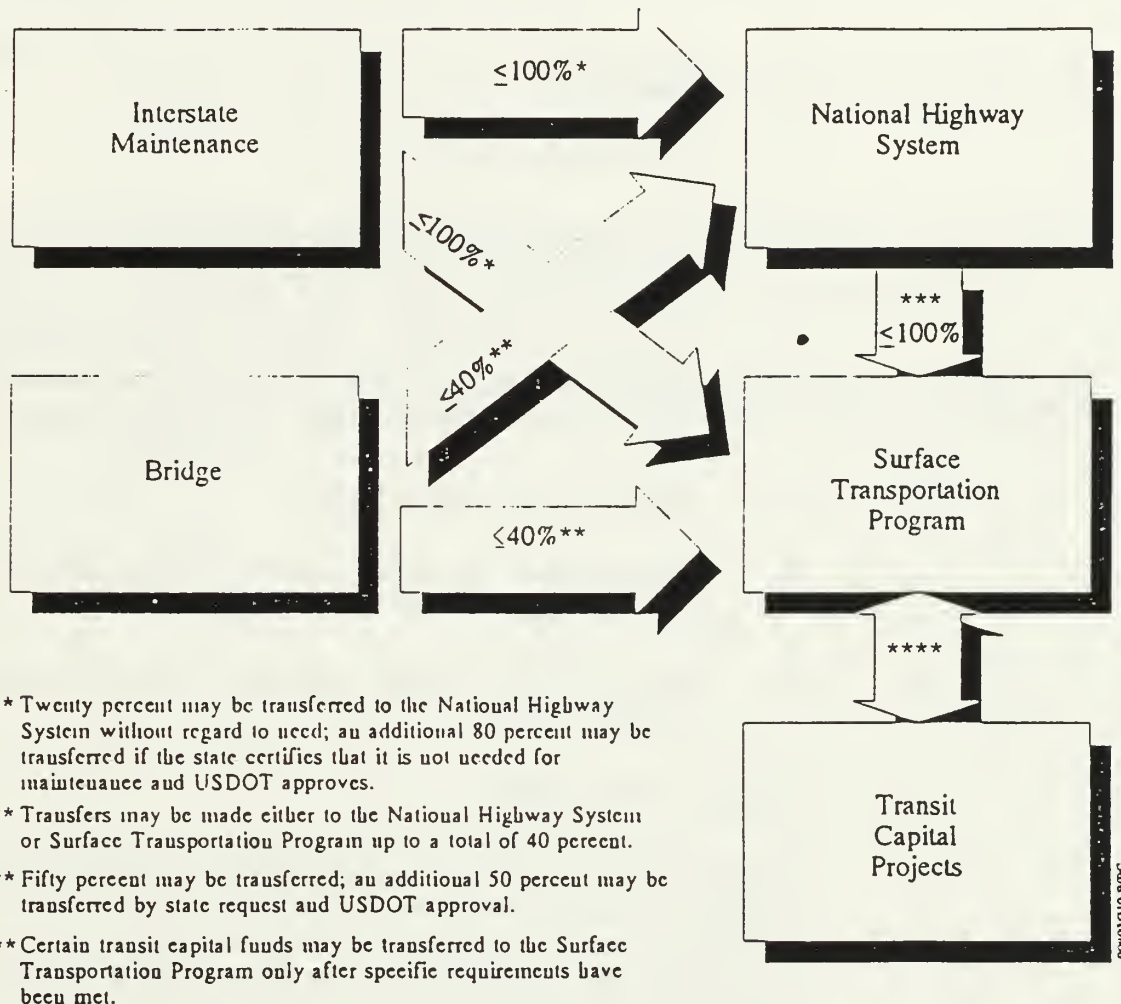
a. Interstate Maintenance

The Interstate Maintenance program is for rehabilitation, restoration, resurfacing, and reconstruction of the Interstate highway system. Use of Interstate Maintenance funds includes the reconstruction of bridges, interchanges, and crossings over and under existing Interstate routes, including the acquisition of right-of-way. Interstate Maintenance funds can also be used for preventive maintenance if it can be demonstrated that doing so will cost-effectively extend bridge and pavement life.

The federal government provides 91.24 percent of Interstate Maintenance funding. States are responsible for 8.76 percent.

Exhibit V-3

Rules for Making Transfers Between ISTEA Categories



b. National Highway System

National Highway System funds are dedicated to the improvement and maintenance of roads designated as part of the National Highway System. The final composition of the National Highway System is expected to be approved by Congress in 1995. Preliminary indications are that the National Highway System will incorporate Montana's portion of the Interstate system and about 2,700 miles of additional Montana roadway. This would leave more than two-thirds of Montana roadway mileage classified before ISTEA as federal aid primary highway out of the National Highway System.

The federal government provides 86.58 percent of National Highway System funding, leaving Montana responsible for 13.42 percent.

Eligible uses for National Highway System funding include:

- Construction, reconstruction, resurfacing, restoration, and rehabilitation.
- Operational improvements.
- Construction of, and operational improvements for, a federal-aid highway not to the National Highway System and construction of a transit project eligible under the Federal Transit Act in the corridor of fully access-controlled National Highway System routes. These projects must be cost effective and improve the level of service on the National Highway System segment.
- Highway safety improvements.
- Transportation planning, highway-related technology transfer activities, and research and development.
- Start-up costs for traffic management and control (limited to two years).

c. Bridge Program (BR)

Bridge Program funds are for rehabilitation and replacement of deficient bridges. In addition to standard inspection, maintenance, rehabilitation, and replacement of bridges, Bridge Program funds can be used for bridge painting and the seismic retrofit of deficient bridges. The Bridge Program allows for the installation of bicycle and pedestrian facilities during bridge rehabilitation and replacement projects.

A minimum of 15 percent of state Bridge Program funds must be used on local roads, rural minor collectors or off-system bridges. States may increase the share of their Bridge Program funds used on off-system bridges to a maximum of 35 percent. Montana has selected to use 35 percent of its fiscal year 1995 Bridge Program funds for off-system bridges.

The federal government provides 80 percent of Bridge Program funding and states are responsible for 20 percent. Montana's Bridge Program funding for fiscal year 1994 was 9.95 million.

d. Surface Transportation Program

All roads functionally classified as major collectors and above and that are on a state funding system can be improved with Surface Transportation Program funds.

ISTEA requires that each state set aside ten percent of its Surface Transportation Program apportionment for use in safety and prevention projects and a further ten percent for transportation enhancements.

A special feature of Montana's system of transportation funding is the allocation of Surface Transportation Program funds among state designated funding systems.

Exhibit V-4
Montana ISTEA Obligations, Fiscal Year 1995.
 (\$ in millions)

	Surface Transportation Program	National Highway System	Interstate Maintenance	Congestion Mitigation and Air Quality	Bridge Program	Safety and Hazard Elimination	Transportation Enhancements
Total Program Funding	\$31.62	\$33.61	\$48.62	\$2.57	\$2.68	\$5.31	\$1.31
Federal Share	\$27.38	\$29.09	\$44.36	\$2.22	\$2.14	\$4.78	\$1.13
Montana Share	\$4.24	\$4.52	\$4.26	\$0.348	\$0.540	\$0.530	\$0.180
Federal Percentage	86.58%	86.58%	91.24%	86.58%	80.00%	90.00%	86.58%
Montana Percentage	13.42%	13.42%	8.76%	13.42%	20.00%	10.00%	13.42%
Montana Match to Each federal Dollar	\$0.15	\$0.15	\$0.096	\$0.15	\$0.25	\$0.11	N/A

Source: Montana Department of Transportation, State Transportation Improvement Program 1995-1997.

Exhibit V-5 Eligible Uses for ISTEA Program Funds

	Surface Transportation Program	National Highway System	Interstate Maintenance	Congestion Management and Air Quality	Bridge Program	Safety and Hazard Elimination	Transportation Enhancements
Eligible Uses	Improvement and preservation to any road not functionally classified as a local or rural minor collector. Uses include bridges and safety projects, bicycle and pedestrian facilities, and carpool and vanpool programs.	Improvement and preservation of Montana's portion of the National Highway System.	Rehabilitation, restoration, resurfacing, and reconstruction of Montana's portion of the Interstate highway system	Projects that contribute to attainment of federal Clean Air standards and to alleviating congestion in urban areas, including transit, transportation demand management, and pedestrian and bicycle facilities.	Rehabilitation and replacement of deficient bridges. To be used for both on system and off system bridges.	Construction of safety and hazard elimination facilities on roadways and at highway-rail crossings..	Environmental related projects including historic preservation, bicycle and pedestrian, landscaping, preservation of abandoned railroad corridors, removal of outdoor advertising, and water runoff mitigation.
Notes	Montana suballocates between Primary, Secondary, and Urban Highways.			Missoula only eligible area in Montana.			

Legislation passed by the 53rd session of the Montana legislature requires that Montana's Surface Transportation Program funds be suballocated between the different state funding systems.

For fiscal year 1994, these divisions were allocated as follows:

- Primary highways - \$33.85 million.
- Secondary highways - \$13.12 million.
- Urban highways - \$4.47 million.

Eligible uses for Surface Transportation Program funding include:

- Roadway construction, reconstruction, resurfacing, restoration, and rehabilitation.
- Operational improvements.
- Capital costs for transit projects and publicly owned intracity or intercity bus terminals or facilities.
- Highway and transit safety improvements.
- Surface transportation planning, highway and transit technology transfer activities, and research and development.
- Capital and operating costs for traffic management and control.
- Fringe and corridor parking facilities.
- Carpool and vanpool projects.
- Most transportation control measures in the Clean Air Act.
- Development and establishment of management systems.
- Transportation enhancements.
- Participation in wetland mitigation and wetland banking.
- Bicycle facilities and pedestrian walkways.
- State bicycle and pedestrian coordinator.

(1) Safety and Hazard Elimination

Under ISTEA, Montana and other states must use ten percent of Surface Transportation Program funds for safety construction and hazard elimination. Examples of project uses include signing, no passing zone stripping, installation of flashers and crossing gates, and pavement marking.

Montana subdivides its Hazard Elimination funds into two categories:

- STPHS: Hazard elimination on high accident roadways.
- STPRP: Eliminating hazards at rail/highway crossing.

The federal government provides 90 percent of Hazard Elimination funding and states are responsible for 10 percent. Montana's funding allocation for fiscal year 1994 was \$5.4 million.

(2) Transportation Enhancements

ISTEA requires that Montana and other states use ten percent of Surface Transportation Program funds for transportation enhancements. Enhancements include a broad range of improvements and activities, including acquisition of scenic and historic sites, landscaping and other scenic beautification, bicycle and pedestrian, preservation, rehabilitation and operation of historic transportation structures, buildings, and facilities, preservation of abandoned railway corridors, control and removal of outdoor advertising, archeological planning, and mitigation of water pollution caused by highway runoff.

Montana established the Community Transportation Enhancement Program to allocate Enhancement funds to local communities. Cities over 1,000 population and counties are allocated Community Transportation Enhancement Program allocations through a per capita distribution. Local governments must provide a match to their state Community Transportation Enhancement Program allocations.

The federal government provides 86.58 percent of enhancement program funding for all projects other than bicycle/pedestrian facilities, for which the federal share is 80 percent. Local governments are responsible for 13.42 percent and 20 percent

respectively. The Community Transportation Enhancement Program funding allocation for fiscal year 1994 was \$5.43 million.

e. Congestion Mitigation and Air Quality

Projects funded by the Congestion Management and Air Quality program must contribute to attainment of federal Clean Air Act air quality standards.

The federal government provides 86.58 percent of Congestion Management and Air Quality funding. States are responsible for 13.42 percent. Montana allocated \$4.87 million in Congestion Mitigation and Air Quality projects in fiscal year 1994.

2. Highway revenues

The revenues available to finance TranPlan 21 include the federal funding programs described above and revenues collected directly by Montana. Montana uses directly collected revenues to meet its federal ISTEA match requirements and to supplement Surface State Transportation Program funds to finance improvements on the secondary system, local roads and highway maintenance.

Exhibit V-6 breaks down projected fiscal year 1995 highway program revenues by revenue source. This shows the source of the revenues that finance projects in the fiscal year 1995 highway program.

**Exhibit V-6
Projected Highway Program Revenues**

Revenue Source	Total (\$Million)
Fuel tax	161.8
Gross Vehicle Weight Fees	26.9
Other/Accounts Receivable	1.3
Federal funds	111.1
TOTAL	301.1

Source: MDT Cash Flow Projections 5/10/94 and MDT
Statewide Transportation Improvement Program, 195 to 1997

Total highway program revenues are projected at \$300 million. The federal government is projected to contribute just over one-third of highway program revenues. Montana's highway revenue sources are described in turn.

a. Fuel taxes

Fuel taxes on gasoline and diesel fuel provide the largest source of direct collected revenue used to finance the MDT's highway program. For fiscal year 1995, fuel tax receipts are projected to total \$161.8 million, or 53.9 percent of total highway program revenues. Taxes upon gasoline represent about 72 percent of projected fiscal year 1995 fuel tax receipts, with the balance coming from taxes upon diesel.

Montana's fuel tax is currently 27 cents per gallon. There were two recent fuel tax increases authorized by the state legislature. One increase added three cents to the fuel tax rate effective July, 1993. A second increase effective July 1994 added another three cents to the fuel tax rate.

b. Gross Vehicle Weight fees

Montana levies Gross Vehicle Weight fees upon commercial vehicles using Montana's highways. The fees are based upon the gross weight of commercial vehicles as measured by scales located at highway weigh stations. Montana's Gross Vehicle Weight fees are based on vehicle weight only, and apply to vehicles weighing in excess of 6,000 pounds. Gross Vehicle Weight fees to the highway program are projected to total \$26.9 million in fiscal year 1995 and account for 9 percent of highway program revenues.

c. Other direct collected revenues

In addition to fuel taxes and Gross Vehicle Weight fees, the MDT draws upon other revenues to finance its highway program. Montana levies a sales tax upon new vehicles purchased in Montana, with revenues dedicated to highway improvement and preservation. The tax ranges from 3/8 to 1.5 percent of vehicle list price, depending upon value. The MDT includes sales tax receipts in the Gross Vehicle Weight fee category when reporting revenues, so sales tax revenues are not independently identified in Exhibit V-6.

Other direct collected revenues used to fund the MDT's highway program include various permit fees and fines remitted to the Montana Department of Justice and revenues from Montana's Coal Tax Trust Fund. The

Governor's Office of Budget and Planning has proposed eliminating Coal Tax receipts as a source of highway program revenues.

d. Revenue bonds have expired

In the 1980s, the MDT issued \$150 million in revenue bonds. Bonds are not a revenue source but a cash flow mechanism that allows for large expenditures in a short period of time to be paid off from revenues over a longer period of time. The bond issue helped pay for a substantial part of the MDT's highway program between 1983 and 1992. Bond proceeds constituted the major funding source for the Reconstruction Trust Fund and secondary highway preservation. Bond proceeds have now been exhausted and revenues from this source are no longer available. The MDT continues to fund the Reconstruction Trust Fund out of current revenues at a level of \$20 million per year.

e. State funded programs

The state directly funds the reconstruction trust fund that makes state fuel tax funds available for secondary system improvements and the state's maintenance program.

(1) Reconstruction Trust Fund

The Reconstruction Trust Fund is a highway preservation program wholly funded with revenues directly collected by Montana. The federal government plays no role in funding the Reconstruction Trust Fund. For fiscal year 1994 \$20 million was allocated to the Reconstruction Trust Fund and for fiscal year 1995 \$20.6 million. This represents a large decline from the 1991 level of \$48 million. The decline is mainly due to the exhaustion of proceeds from bonds Montana sold during the 1980s. At present, Montana is financing the Reconstruction Trust Fund out of current revenues.

The Reconstruction Trust Fund is the major source of funding for preservation projects on Montana's secondary highway system. Funding for fiscal year 1995 is forecast to be \$20.61 million, of which over 75 percent (\$15.65 million), will be allocated for secondary system preservation. The balance is earmarked for preservation of urban roads (\$420,000) and preservation of the orphan plant (\$4.54 million).

(2) Highway maintenance

Maintenance of Montana's highway system is funded wholly with state revenues. Maintenance includes roadway plowing and sanding, patching and sealing, and upkeep of roadside facilities. The cost of maintaining Montana's highways has increased in recent years, rising to \$60 million in fiscal year 1995 from \$45 million in fiscal year 1991.

The MDT funds maintenance at the level necessary to ensure that Montana is eligible for the most favorable matching ratio for federal ISTEA highway funding assistance.

3. Suballocation of Surface Transportation Program Funds

A special feature of Montana's system of highway funding is its suballocation of federal Surface Transportation Program funds among state designated roadway system categories. Montana's suballocation combines strong local input in highway project selection with MDT administration of project development and project financing.

By statute, Montana's highway system is divided into the following three systems:

- Primary Highway System.
- Secondary Highway System.
- Urban Highway System.

Each year, the Montana Highway Commission divides the state's Surface Transportation Program funds between these three systems.

Exhibit V-7 depicts how Montana's Surface Transportation Program funds were divided for fiscal year 1995. Suballocation involves further division of the funds distributed to each highway system.

Funds suballocated to local governments are not actually transferred to local government control. Funds used for locally prioritized projects remain under the administration of the MDT.

4. Transit Funding

The MDT plays a role in the Section 5310 (formerly Section 16) program, which provides funding for transportation of the elderly and of persons with disabilities and the Section 5211 (formerly Section 18) program, which funds transit in small cities and rural areas. Montana applies for annual grants from the Federal Transit Administration under both programs. Montana allocates its grant receipts among local transit providers based upon need and the availability of local matching funds.

Exhibit V-7 Distribution of Surface Transportation Program Funding by Highway System Fiscal Year 1994

Montana Highway System Category	STP Funding (in millions)	Percent of STP Funding	Lane Miles	\$ Per Lane Mile	Annual Vehicle Miles Travelled*	\$ Per Vehicle Mile Travelled ²
STP Total ¹	\$51.44	100%	N/A	N/A	N/A	N/A
to Non-NHS Primary	\$33.85	65.8%	5,793	\$5,843	3,018,389	\$11.20
to Secondary	\$13.12	25.5%	9,244	\$1,419	1,585,363	\$8.3
to Urban	\$4.47	8.7%	769	\$5,812	1,936,253	\$2.4

Source: Montana Department of Transportation

¹ Excluding set asides.

² Average Vehicle Miles Travelled is for 1993. \$/Vehicle Miles Travelled represents fiscal year 1994 expenditures divided by 1993 Vehicle Miles Travelled data. More recent vehicle mileage data unavailable.

Billings, Missoula, and Great Falls receive transit funding under the Section 5307 (formerly Section 9) urban transit block grant program. These cities apply for Section 5307 grants directly from the Federal Transit Administration. State government has little direct involvement in the Section 5307 program.

a. Section 5310 - elderly and disabled transit

The Section 5310 program provides federal funds for the purpose of providing transportation services to the elderly and persons with disabilities. Prior to recodification, the program authorized by Section 5310 was known as the Section 16 program.

Local transit providers eligible for Section 5310 funds include city and county governments, local transit authorities, nursing homes, hospitals, and local and regional Agencies- and Councils on Aging. The Federal Transit Administration will pay a maximum of 70 percent of eligible project costs under a Section 5310 program grant. Local transit providers must provide the remaining 30 percent.

In a typical year, the MDT receives about 35 to 45 applications from local transit providers for funding under the Section 5310 program. Typically, available funding is adequate to meet only about one-third of grant requests.

- In 1994, Section 5310 funding in Montana totalled \$383,976. The Federal Transit Administration paid \$268,783 of this total, and the state, \$11,519. Local transit operators provided the remaining \$103,674.

b. Section 5311 - rural and small city transit

The Section 5311 program provides federal funds for the purpose of providing transportation services in non-urbanized areas under 50,000 population. Prior to recodification, the program authorized by Section 5311 was known as the Section 18 program.

Under Section 5311, the Federal Transit Administration will pay a maximum of 70 percent of project capital and administrative costs and a maximum of 50 percent of transit system operating deficit costs. The remaining 30 and 50 percent must be provided by local transit providers and other sources. In Montana, most Section 5311 funds are used to pay for transit system operating expenses.

- In 1994, Section 5311 funding in Montana totalled \$1,099,744. The Federal Transit Administration paid \$646,086 of this total and the state, \$24,265. Local transit providers paid \$429,393.

Typically, the MDT allocates Section 5311 funds among the following nine transit operators:

- Butte-Silver Bow County Transportation, Butte.
- Helena Bus-Dial a Ride, Helena.
- Fort Peck Transportation, Poplar.
- Garfield County Council on Aging, Jordan.
- Black Feet Health Board, Browning.
- Powder River Council on Aging, Broadus.
- Flathead County Area 9 Agency on Aging, Kalispell.
- Valley County Council on Aging, Glasgow.
- Fergus County Council on Aging, Lewistown.

c. Section 5307 - urban transit block grants

The Section 5307 program provides grants to transit systems in cities with populations of over 50,000. In Montana, the cities of Missoula, Great Falls, and Billings are eligible for Section 5307 assistance. The program is administered directly between eligible cities and the Federal Transit Administration. The MDT plays little role in the Section 5307 program.

Section 5307 funds can be used for planning, acquisition, construction, and operation of facilities and equipment used in public transit. The federal government will pay up to 80 percent of the cost of capital and planning projects and up to 50 percent of transit system operating deficits. Prior to recodification, the Section 5307 program was known as the Section 9 program.

- Total 1993 Section 5307 funding for Missoula, Great Falls, and Billings was \$1,319,480. The Federal Transit Administration provided \$1,055,584 of this total, local match totalled \$263,896.

5. Aeronautics Funding

The Montana Department of Transportation operates two programs aimed at financing airport development and improvement projects. One program is a grant program and the other is a loan program. Both programs were established in 1993.

Any state agency and any city, town, county, or other political subdivision of the state that operates an airport open to the public is eligible for assistance under the loan and grant programs. Grant amounts are limited to 50 percent of the sponsor's share of airport project costs. Loans can be for a maximum of 100 percent of project costs. Loan rates are fixed at 1/2 of the Prime Rate as determined by the Montana Board of Investments in January of each year. Loan payback periods of up to ten years are allowed.

Aviation programs administered by the MDT are funded by a 3 cent per gallon tax that Montana levies upon the purchase of aviation fuel. Use of the 3 cent fuel tax breaks down as follows:

- The first penny collected per gallon of fuel tax is dedicated to finance the administrative and mandated functions of the MDT's Aeronautics Division, including pilot and airplane registration. Revenue dedicated to administration and mandated functions totalled \$385,000 in 1994.
- The second penny collected per gallon of fuel tax is dedicated to finance of the Airport Development Loan Program. Revenue dedicated to airport development loans program totalled \$85,000 in 1994.
- The third penny collected per gallon of fuel tax is dedicated to finance of the Airport Development Grant Program. Revenue dedicated to airport development grants totalled \$85,000 in 1994.

State law allows Part 121 air carriers and Part 135 air taxi and commercial air service operators to receive rebates on the amount of second and third penny of aviation fuel tax they pay. Eligible parties must formally make a request for rebate to the MDT in order to receive a rebate.

The MDT also operates the Preliminary Engineering Grant program. This program offers grants of up to \$1,000 to airports to assist in planning, engineering, design, and other improvement preconstruction activities. Expectations are that with the advent of the development grant and loan programs, the Preliminary Engineering Grant program will be little utilized in the future.

6. Rail Programs

Montana is eligible for federal rail assistance under the Local Rail Freight Assistance Act. The Program provides funding on a federal/local matching share basis for rail planning and rail service assistance projects. Under the Local Rail Freight Assistance Act, the federal government will pay 50 percent of acquisition and construction costs and 70 percent of rehabilitation project costs. The balance of project costs must be provided from other sources.

Under the Local Rail Freight Assistance Act, Montana receives \$36,000 annually for rail planning. States can also compete for discretionary project funds. To be eligible for funding under the Local Rail Freight Assistance, a project must be documented in a current state rail plan. Montana has not applied for any discretionary the Local Rail Freight Assistance Act funding due to a lack of committed projects.

B. ANALYSIS OF HIGHWAY EXPENDITURES

Actual highway expenditures are presented by major expenditure categories for fiscal year 1995 and compared to average annual expenditures for the preceding period 1990 to 1994 in Exhibit IV-7.

Construction and preconstruction accounted for the largest share of highway program expenditures in both periods. The construction and preconstruction category includes expenditures for constructing new and reconstructing existing highway facilities, resurfacing and widening, bridge repair and rehabilitation, and safety improvements.

Maintenance comprised the second largest single category of highway program expenditures in both periods. Maintenance is also projected to continue to occupy the second largest category of MDT highway spending in the future.

In fiscal year 1995, 4.6 percent of Highway Program expenditures were budgeted for local governments. This represented the \$16.8 million in fuel tax revenues earmarked under state law to cities and counties.

The Other expenditure category includes a number of non-highway expenses. Included are transfer payments to the Montana Department of Justice to pay for the state Highway Patrol and expenses incurred for servicing the MDT's bonded debt. In fiscal year 1993, the MDT began to repay the principal on bonds it sold during the 1980s to finance the Reconstruction Trust Fund. The costs of repaying this principal explains much of the increased expenditure share accounted for by the Other category in fiscal year 1995. The

MDT projects that bond interest and principal should be retired in its entirety in fiscal year 2006.

The major features of the change in program expenditures from 1989 to 1994 are discussed in turn.

1. Decline in Reconstruction Trust Fund expenditures

An important difference between expenditure periods fiscal year 1995 and the preceding five year period lies in the share of MDT spending accounted for by the Reconstruction Trust Fund.

The decline in Reconstruction Trust Fund spending is mainly due to the exhaustion of proceeds derived from Montana's bond sale during the 1980s. Bond revenues were the principal source of financing for the Reconstruction Trust Fund. The Reconstruction Trust Fund is now financed out of current revenues.

2. Expenditures for Federal Match Requirements

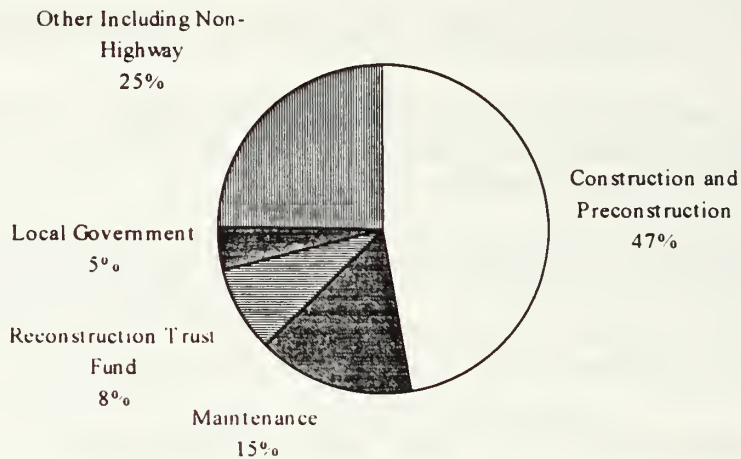
Montana's ability to meet the matching requirements that accompany federal transportation funding will be a key issue for implementing TranPlan 21. With the passage of ISTEA, the revenues needed annually by the MDT to meet its federal matching requirements more than doubled to \$37 million in fiscal year 1994 from \$18 million in fiscal year 1990.

Recognition that the MDT would be unable to meet new federal matching requirements that accompanied ISTEA was a major factor that led to the legislature to increase the state's fuel taxes in 1993 and 1994. Failure to meet federal matching requirements in the future could place in jeopardy millions of dollars of federal transportation assistance.

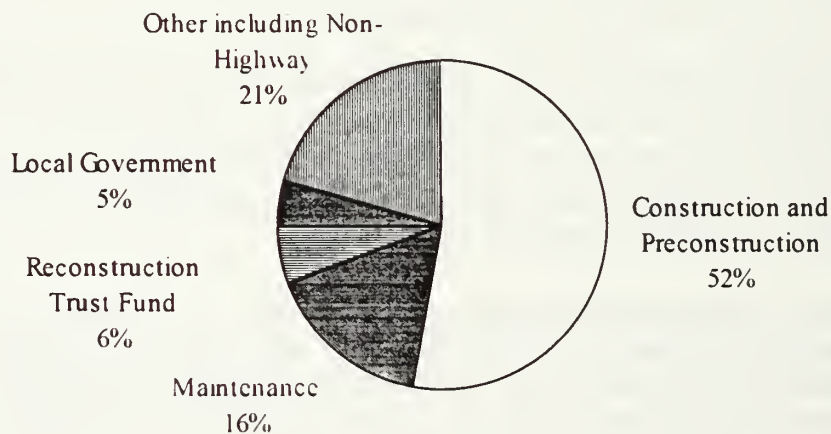
Two factors should be kept in mind as Montana evaluates its future federal matching obligations. One is the possibility and even likelihood that federal matching requirements may rise in future years as federal budgets become tighter. Montana must also keep in mind that the transportation programs under which Montana draws funding from the U.S. Department of Transportation operate on a reimbursement basis. The MDT must fund construction costs and then await reimbursement from the federal government. In evaluating its funding needs, Montana must keep in mind that it needs revenues sufficient not only to meet current costs, but that revenues must be adequate to allow it to meet its reimbursable federal matching obligations as well.

Exhibit V-8 Highway Program Expenditures¹

Fiscal Year 1989 to 1994 Average



Fiscal Year 1995



Source: Montana Department of Transportation Cash Flow Reports.

¹Includes new obligations, previous obligations outstanding and reserve required for federal match.

3. Cost Responsibility

Cost responsibility refers to the degree to which the users of transportation facilities, and services pay for the costs associated with provision of the facilities and services they use.

The two most important issues when assessing cost responsibility in Montana are the degree to which the transportation system is financed through user-specific revenue sources and the degree to which these revenues are equally shared by individual categories of transportation system users.

Montana's most recent cost allocation study was completed in 1992. The study only examined cost allocation on Montana's interstate highway and primary highways.

The results from the Montana's 1992 cost allocation study are presented in Exhibits V-9 and V-10. The study evaluated the degree to which the costs of improving and maintaining Montana's highways were incurred by highway users as opposed to non-highway users and the degree to which individual classes of highway users paid the cost that users of their classification placed on the highway system. The study concluded that Montana's system of highway finance is characterized by a level of cost responsibility roughly consistent with other states and consistent with the principal that the highway system should be primarily financed by its users.

As Exhibit V-9 indicates that in 1992, 87 percent of highway revenues in Montana were derived directly from users in the form of fuel taxes, gross weight fees, new vehicle sales tax revenues, and other transportation related revenues, including permit fees and traffic violation fines. Only 13 percent of highway revenues were derived from non user specific sources.

User equity is evaluated in terms of equity ratios, that measure the ratio of average revenue to allocated costs of providing user service. Equity ratios less than 1.00 indicate that a user group is relatively underpaying its share of highway costs. Ratios exceeding 1.00 indicate that a user group is overpaying. An equity ratio of 1.00 indicates the user group is paying exactly its share of highway costs.

Exhibit V-9 Percent of Highway Revenue by Source Montana and Other States

State	Percentage of Revenue by Source						
	User Specific Revenues				Total User Specific Revenue	*Non User Specific Revenue	Total
	Fuel Taxes	Motor Carrier Fees	Regis- tration Fees	Other User Specific			
Montana (1992)	68	14	0	5	87	13	100
Nevada (1986)	55	16	17	9	87	3	100
Wyoming (1980)	19	28	11	0	58	42	100
California (1987)	38	20	38	0	96	4	100
Maine (1989)	68	**	18	5	94	6	100
Oregon (1986)	48	42	10	0	100	0	100

Source: Stephens, Jerry (1992): Financing the Montana State Highway System.

*In Montana, includes new vehicle sales tax. In other states, includes highway permits, drivers licenses, and turnpike tolls.

**Weight related component of Maine motor carrier fee included in registration fees.

Exhibit V-10 presents equity ratios for three broad categories of users of Montana's highways. These categories are as follows:

- Basic vehicles: Automobiles, motorcycles, vans, pickups, and other vehicles with a gross weight less than 10,000 pounds.
- Intermediate vehicles: Busses and single unit trucks with two axles and average operating weight less than 26,000 pounds.
- Heavy vehicles: Vehicles with operating weights more than 26,000 pounds, generally including single unit trucks with three or more axles and all truck and trailer combinations.

With an equity ratio of 0.96, basic vehicles are slightly underpaying their share of highway costs. In contrast, intermediate and heavy vehicles, with equity ratios of 1.11 and 1.07, are slightly overpaying the costs they impose on Montana's highway system. While these ratios do not reflect exact equity in the sharing of user costs, these figures are roughly consistent with the results of cost allocation studies conducted in other states.

Exhibit IV-11
Highway User Equity Ratios
Montana and Other States

Study	Equity Ratio		
	Basic Vehicles	Intermediate Vehicles	Heavy Vehicles
Montana (1992)	0.96	1.11	1.07
Maine (1989)	0.99	0.96	1.09
Vermont (1991)	1.02	1.11	0.92
Wyoming (1981)	1.00	1.26	1.20
Nevada (1988)	1.00	1.00	
Oregon (1991)	0.94	1.11	

Source: Stephens, Jerry (1992): Cost Allocation Study for the Montana State Highway System

C. FUTURE TRANSPORTATION FUNDING IN MONTANA

1. Future revenues

Revenues are projected to be largely static throughout the Plan's life with a slight downward slope. In fiscal year 1995, the MDT will have a projected \$305.5 million available for the Highway Program. This figure will trail off slowly, dropping to \$303.3 million in fiscal year 2014.

Under the matching requirements that accompany federal highway assistance, the MDT must fund construction costs prior to federal reimbursement. The MDT must retain sufficient cash flow to meet these advanced funding requirements. The MDT must retain a reserve sufficient to meet its advance funding needs. This means that not all funds that the MDT had access to can be used to meet current needs.

This conclusion is based upon a MDT cash flow projection dated October 5, 1994. Adjustments have been made to remove funds earmarked for Architecture and Engineering, local government, and the Montana Department of Justice, because these earmarked revenues will not be available to the MDT for general highway uses.

Federal revenues are assumed to be a constant at approximately \$155 million annually throughout the life of the Plan. For this level of federal funding to fully materialize, the Congress would have to fully fund ISTEA, something it has failed to do in the past. Federal budgets are also anticipated to be tight in the coming decade. For these reasons, full congressional funding of ISTEA is unlikely.

In practice, inflation is likely to erode the purchasing power of the dollar with each successive year. Given that revenues assume full funding of ISTEA, which is unlikely, and do not account for any erosion in purchasing power that inflation is likely to cause, the projections presented should be thought of as optimistic. Actual revenues available to Montana could well be lower than projected.

2. Transportation finance alternatives

To preserve the transportation system and address needs arising from growth, Montana will need to increase funding levels over the next twenty years. The transportation finance alternatives available to close the gap between projected revenues and anticipated needs for roadway improvement and maintenance over the next twenty years are outlined. They all would require legislative authorization.

a. Existing Fuel Taxes and Gross Vehicle Weight Fees

The traditional approach to meeting increased need for transportation revenues in Montana has been to increase fuel taxes. This appears the most likely approach available to Montana for raising additional revenues for meeting the state's highway needs in the future.

Montana could also seek to raise revenues for highway improvement and preservation by raising the Gross Vehicle Weight fees it levies upon motor vehicle carriers. Any increase would have to be consistent with the principal of cost responsibility.

b. Fuel Tax Indexing

Indexing fuel tax rates to rise with inflation would help to ensure that revenues do not decline in real terms due to inflation. Fuel taxes could be indexed by being set at a percentage of fuel prices, or being linked to changes in the consumer price index, or the construction price index.

c. Bonded Debt

Bond debt does not generate new revenues but can be used to manage cash flow and address the timing needs for large infrastructure projects. Montana has used bonds for transportation finance in the past. In the 1980s, the MDT issued bonds to generate revenues for use in funding the Reconstruction Trust Fund.

Any decision to use bond debt to raise additional revenue would be contingent upon either a refunding or repayment of existing debt or authorization from the legislature to increase the MDT's debt limit. A key issue in any decision on the future use of bonded debt is the degree to which revenues are projected to be sufficient to allow the MDT to meet its obligations to pay off debt principal and interest. Current projections indicate that the MDT will incur a cost of about \$16 million per annum through 2006 in paying off the interest and principal on its existing bond obligations.

d. Statewide motor vehicle registration or vehicle licensing fees

Currently, counties in Montana generate revenues for roadway improvements by assessing licensing fees upon county resident owned vehicles. However, there is no state licensing or registration fee or tax at the current time. Montana could seek to raise revenues for roadway improvement and preservation by establishing statewide motor vehicle registration or vehicle license fees.

e. Toll Roads

Toll charges have long been used to finance large scale highway, bridge, and tunnel projects. Typically, toll roads involve commensurate use of bonded debt. Tolls are usually set at a level necessary to generate revenues needed to pay off bonds sold to provide initial roadway construction. On occasion, tolls have been maintained in place even after bonded debt has been retired, with derived revenues being used for wider transportation system improvement and maintenance. Contemporary thinking about tolls would focus more upon setting tolls levels at a cost necessary not only to pay off initial construction costs but to also maintain transportation facilities over their life-cycle.

ISTEA stipulates the types of toll-facility users for which federal transportation funds may be used. These uses are identified in Exhibit V-14. However, as a practical matter, Montana is probably an unlikely candidate for toll roads. The magnitude of the revenues needed for cost recovery for most toll facilities means that toll roads are only feasible for heavily travelled roadways. Few roadways in Montana appear likely to generate traffic volumes sufficient to meet toll road revenue recovery needs.

f. Congestion Pricing

Congestion pricing involves the use of toll charges during periods when demand for roads exceeds capacity. On very heavily congested roadways, this could effectively amount to continuous charging. On roadways that are only congested during peak periods, the charges could be levied only intermittently.

Exhibit V-14
Activities on Federal-Aid Facilities Eligible for
Toll Financing and Public/Partnerships

Activities on Federal-aid Facilities Eligible for Toll Financing and Public-Private Partnerships	Federal-aid Percent Share			
	Interstate		Non-Interstate	
	Highways	Bridges/ Tunnels	Highways	Bridges/ Tunnels
Initial construction of toll highways, bridges, tunnels, and approaches to these facilities	NA	NA	50	80
Reconstruction of toll highways, bridges, tunnels, or approaches	50	80	50	80
Resurfacing, restoring, and rehabilitating of toll highways, bridges, tunnels, or approaches	50			
Reconstruction or replacement of free (non-Interstate) highway or toll-free bridges or tunnels on or off the Interstate together with conversion to toll facilities	NA	80	50	80
Preliminary feasibility studies of the aforementioned toll construction activities	50			

Congestion pricing has two aims. One is to alleviate congestion. By charging for roadway use during congested periods, congestion pricing aims to defer trips by travellers who do not value peak-hour travel highly enough to pay the charge. Ideally, roadways users who do not value trips highly enough to pay a charge would either eliminate peak hour trips outright, shift the trips to less congested periods of the day, or substitute public transit for trips they would otherwise make by automobile, and thus reduce roadway congestion and delays. The other aim of congestion pricing is to raise revenues that could be invested in transportation improvements, or other programs aimed at alleviating congestion.

Two frequently mentioned approaches to congestion pricing involve assessing toll charges upon users of congested roadway segments, and assessing parking charges. In either case, care must be taken to ensure that congestion pricing does not adversely affect local competitive advantage to the point where investment is displaced elsewhere. This can serve to increase and extend congestion to formerly uncontested areas.

While the possibility of adopting congestion pricing in Montana cannot be ruled out, as a practical matter Montana appear to be ill suited for congestion pricing. Despite expressions of interest in doing so, no locality or state in America has yet to actually enact congestion pricing. A principal reason is that there is a great deal of public opposition to congestion pricing.

Most importantly, there are few if any areas in Montana that appear likely candidates for congestion pricing. Congestion pricing aims to address transportation problems in heavily congested urban areas.

g. Public-Private Partnerships

Private financing of highway and other public transportation improvements has a long history in America. Private entrepreneurs financed many large scale roadway infrastructure projects during the nation's early years. The past century has seen a diminution in private participation in roadway and transportation infrastructure development, in large part due to the role the federal government assumed in constructing transportation infrastructure under the interstate highways program. However, tight public transportation budgets have generated renewed interest in using public-private partnerships to develop and finance new transportation infrastructure. Interest in private sector involvement in transportation infrastructure development has been encouraged by ISTEA, which allows federal transportation funds to be used in conjunction with private equity for transportation program development.

When used for transportation infrastructure development, public-private partnerships require that a toll charge or other mechanism to collect revenues from transportation facility users for the purpose of retiring debt incurred for project development and to provide private business a measured profit from its participation. For this reason, public-private partnerships share many commonalities with toll roads, and are probably unsuited to Montana.

3. Key Finance Constraints

The key finance constraints that will affect the implementation of TranPlan 21 over the next twenty years are discussed in turn.

a. Revenue shortfall

The most pressing constraint is the need to generate revenues sufficient to meet improvement and preservation needs on the state's highway system. Montana cannot rely upon federal assistance alone to meet these needs. Therefore, if Montana is to continue to address highway needs at today's levels, it will have to generate additional revenues on its own over the next twenty years.

b. Uncertainty of future Federal funding

Montana relies heavily upon federal revenues to fund its highway improvement program. Federal revenues are projected to provide three-quarters of Montana's entire construction spending on state highway in 1995. However, continued funding at current levels is uncertain. This stems from the possibility that the Congress, in seeking to address tight federal budgets, may decide to divert federal gas tax revenues that finance federal highway programs to other uses. This could diminish federal transportation payments to Montana and other states. Another source of uncertainty stems from possible increases in the matching requirements that accompany federal transportation assistance.

The uncertainty surrounding federal transportation financing calls for Montana to develop contingency strategies for raising new revenues and ensuring that available revenues are used most efficiently so that if significant changes do materialize, Montana is positioned to minimize any adverse consequences.

c. Federal match reserve requirements

Notwithstanding the uncertainty surrounding federal transportation revenues, Montana must also act to ensure that it can continue to meet the matching requirements that accompany federal transportation assistance. Federal transportation aid programs operate on a reimbursement basis. Montana must fund construction projects it undertakes with federal assistance first and then wait reimbursement from the federal government. This means that Montana must not only ensure that it has sufficient revenues to meet the costs of the transportation projects it undertakes, but

must also maintain a reserve fund adequate to meet federal advanced funding requirements.

d. Secondary system needs

Montana's ability to finance preservation of the state's secondary highways is a key concern. In the 1980s, the MDT issued bonds to finance system preservation. Bond proceeds have now been exhausted, and revenues from this source are no longer available. While Montana continues to fund preservation of secondary highways out of current revenues, the level of funding is now only half of peak funding level of past years, while system needs remain fairly constant.

e. Local transportation financing

The twenty year life of TranPlan 21 will see many of Montana's local governments face a need for increased transportation revenues. By law, Montana's cities and counties receive a share of the state's fuel tax collections for use in meeting their transportation needs. In fiscal year 1995, cities and counties received \$16.8 million in fuel tax revenues.

Cities and counties also draw upon other revenues sources in meeting their transportation needs, including property taxes and motor vehicle registration fees. Under state law, counties have the option of levying a gas tax of up to two cents per gallon to raise revenues for roadway uses. Currently, no county has chosen to enact an optional gas tax. However, the option is available and counties could make use of the gas tax option in seeking to meet their future roadway revenue needs.

D. REFERENCES

Bozeman City-County Planning Board. 1993. Bozeman Urban Transportation Plan 1993 Update. Bozeman, Montana: Bozeman City-County Planning Board.

FHWA, "Guidance for State Implementation of ISTEA Toll Provision in Creating Public-Private Partnerships," Federal Highway Administration, Washington, D.C., 1993.

Montana Department of Transportation. 1994. Combined Working Cash Flow - Highway Special Revenue Funds. Helena, Montana (Report date October 5, 1994).

Montana Department of Transportation. 1995 - 1997. Draft Statewide Transportation Improvement Program (STIP). Helena, Montana. (Sept. 1, 1994).

Montana Department of Transportation. 1993. Report to the 53rd Legislature. Helena, Montana.

Montana Department of Transportation. 1994. Report to the 54th Legislature. Helena, Montana. :

Montana Department of Transportation. 1993. Transportation in Montana. Transit Section, Transportation Planning Division, Montana Department of Transportation. Helena, Montana. (December).

Montana Department of Transportation. 1994 - 1996. Statewide Transportation Improvement Program (STIP). Montana Department of Transportation. (Sept. 1, 1993).

Montana Department of Transportation. 1993. Montana State Rail Plan Update. Rail and Transit Division, Montana Department of Transportation, Helena, Montana, (June 1993).

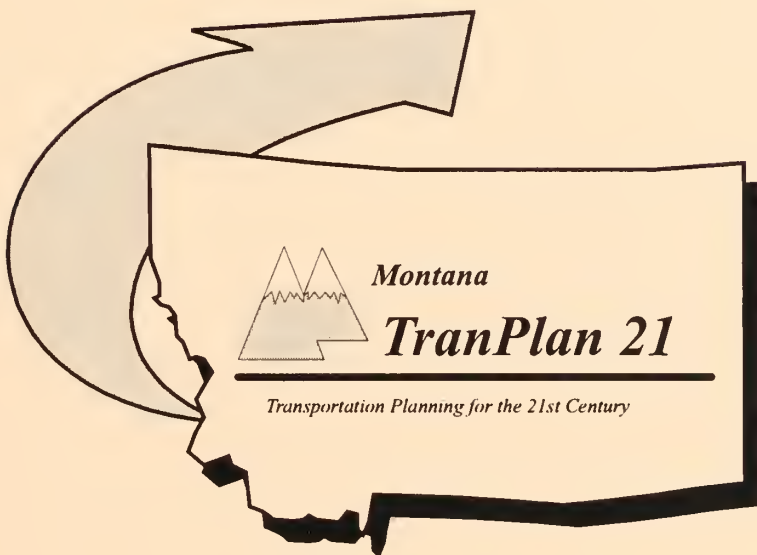
Montana Department of Transportation. 1990. Montana Highway System 1990 Needs Study. Program Development Division, Montana Department of Transportation, Helena, Montana, (November 1990).

Stephens, Jerry. 1992. Financing the Montana State Highway System. State of Montana Department of Highways, Helena Montana (December 1992).

Stephens, Jerry, Tim Barth and William Cloud. 1992. Cost Allocation Study for the Montana State Highway System. State of Montana Department of Highways, Helena Montana (July 1992).

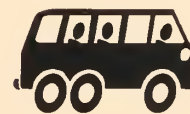
Yellowstone County Board of Planning. 1990. 1990 Transportation Plan: Billings, Montana. Yellowstone County Board of Planning, Billings, Montana. (October 1989).

Policy Papers



Montana Department of Transportation
February, 1995

Prepared by:
Dye Management Group, Inc.



Volume III

TranPlan 21

Volume III - TranPlan 21 Policy Papers

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INTRODUCTION TO TRANPLAN 21 POLICY PAPERS



This volume presents the six transportation policy papers developed to date as part of the TranPlan 21 process. Each policy paper is intended to serve as a "stand alone" document.

The policy papers address the most pressing transportation planning issues identified by transportation users and providers at the start of the planning process. Each paper describes the key planning issues, provides background analysis, and a detailed description of the policy goals and actions adopted by the TranPlan 21 Steering Committee to address the issues. The potential actions which were not adopted by the Steering Committee are included at the end of each paper.

A. Policy Paper Development

Transportation providers, users, other stakeholders, and the public were involved in the development of the policy papers and the selection of the policy goals and actions through the following steps:

- The issues addressed in the papers were identified through a detailed issue identification process involving transportation providers, users, and stakeholders throughout the state. (The results and approach are presented in TranPlan 21 Volume IV, Citizen and Stakeholder Issues and Priorities).
- Transportation providers participated in the development of policy options and the analysis of issues through the review of working drafts of the various papers and the provision of data.
- The draft policy options were made available for public comment through a series of open houses across the state, focus groups in Helena, and by mail. This enabled comment and priorities to be made by the public and different transportation interests before the policy choices were made.
- A public opinion survey involving over 700 Montanans provided information on their most pressing transportation concerns and guidance about the priorities which they believe MDT should attach to many of the actions outlined in the policy papers. (The results and approach are presented in TranPlan 21 Volume IV, Citizen and Stakeholder Issues and Priorities).
- The results of the public comment and the public opinion survey were considered by the TranPlan 21 Steering Committee in adopting and rejecting policy options.

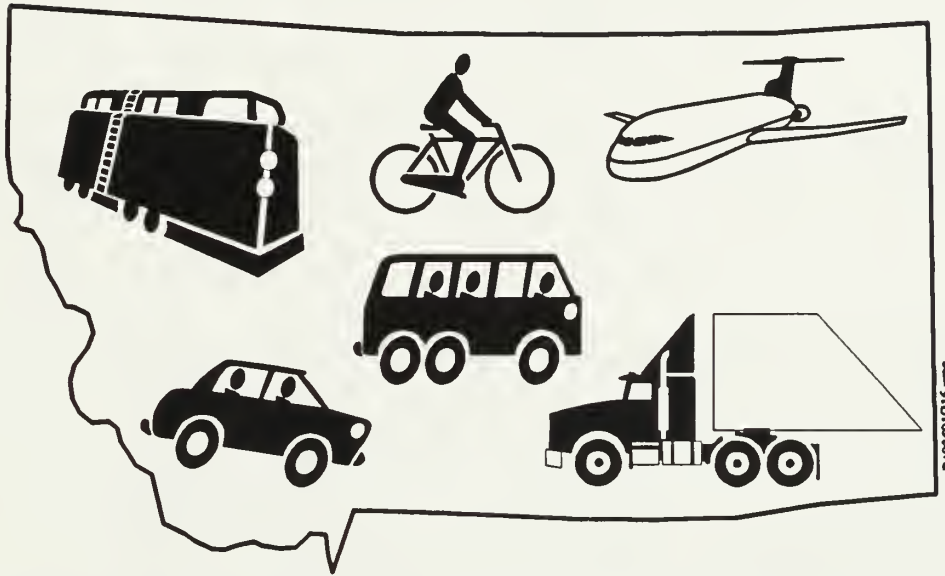
B. TranPlan 21 Policy Papers

The following policy papers adopted by the TranPlan 21 Steering Committee are included in turn in this volume:

- Supporting economic development through the transportation system.
- Freight mobility.
- Roadway system performance.
- Access management and land use planning.
- Public transportation.
- Bicycle and pedestrian transportation.

Montana Department of Transportation

TranPlan 21



Supporting Economic Development
through the Transportation System

Policy Paper

prepared by

DYE MANAGEMENT GROUP, INC.

in conjunction with

Teco Communications

POLICY PAPER

I. TRANSPORTATION AND MONTANA'S ECONOMY-BACKGROUND**A. Montana's Traditional Economic Base**

Montana's economy was built on a foundation provided by agriculture, mining and wood products and other manufacturing. While service-related businesses now are becoming increasingly important, these traditional basic industries will continue to be a staple for Montana's economic health.

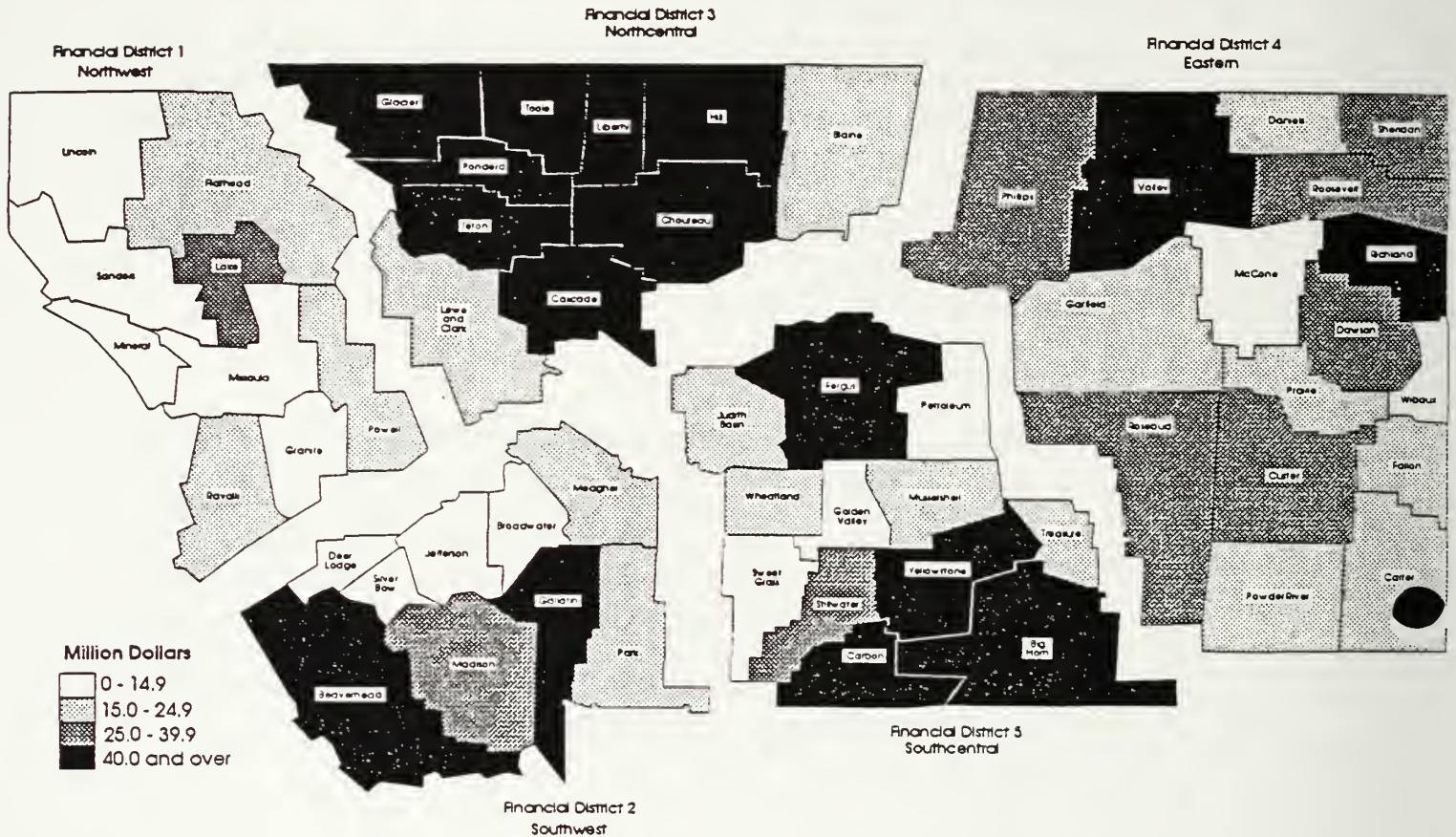
The following discusses the prospects for Montana's basic industries. Background information is broken out for each of the Montana Department of Transportation's (MDT's) financial districts.

1. Agriculture

Montana agriculture annually generates about \$2 billion in annual cash receipts. U.S. Department of Agriculture statistics document that agriculture is an important component of the economy in nearly all Montana counties (Map 1). However, about eighty percent of the agricultural cash receipts are generated in the three MDT financial districts east of the Rocky Mountains. Among Montana's counties, Chouteau and Yellowstone generated the most agricultural receipts, \$135 million and \$127 million respectively, in 1992. Cattle, wheat and barley are Montana's three largest agricultural commodities.

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Map 1 Agricultural Cash Receipts, 1991



Source: Montana Agricultural Statistics Service

Exhibit A Agricultural Receipts

MDT Financial District	Agriculture Cash Receipts 1991 (thousands of dollars)
Montana Total	\$1,502,033
Northwestern Region	126,063
Southwestern Region	202,197
Northcentral Region	552,100
Southcentral Region	402,626
Eastern Region	438,128

Total cash receipts from crops and livestock in Montana increased moderately over the past decade. Dr. Myles Watts, Professor of Agricultural Economics at Montana State University forecasts agriculture will continue to be a major contributor to the Montana economy. However, a wide array of issues may affect the overall profitability of Montana agriculture. For example, crop and cattle prices are subject to wide variation as a result of changes in the world market. Such changes are difficult to forecast in advance.

- "Ninety-two percent of Montana's wheat crop is shipped out-of-state by rail". (Source: Montana Agricultural Statistics Service)

Assuming past trends provide an accurate prognosis for the future, agricultural industries will continue to be a major user of the Montana transportation system. Due to the bulky nature of agricultural commodities, efficient rail transportation is particularly important. Ninety-two percent of Montana's wheat crop was shipped out-of-state by rail in 1993. Rail's share of the Montana grain transport business has increased steadily since the early 1980s.

The dominance of rail as the mode of choice for Montana grain shipments translates into reduced road damage and potentially safer rural highways on long-haul grain transportation corridors. However, this advantage may be offset by new use of semi-trailer trucks for short-haul farm to elevator movements. To gain efficiencies in the rail transportation system, rail

reloading and grain storage facilities have been consolidated into fewer locations. As a result of the longer haul from the field to the elevator system, many farmers find it more efficient to utilize five, seven and eight axle tractor-trailers rather than the traditional two axle farm truck. Not only are there more road miles being generated due to longer hauls from the field to the elevator, but the weight of the vehicles is increasing. Consequently, road damage saved on long-haul routes is being shifted onto short-haul farm to market roads.

2. Mining

Mining is a traditional mainstay of the Montana economy. In 1993, Montana mining industries generated over \$250 million in wages, salaries and business profits. Montana's largest current centers of mining activity are located across the southern tier of the state (Map 2).

Nonfuel mineral mining accounts for more than 80 percent of Montana's current activity. The nonfuel minerals industry includes several sectors: metal mining (gold, silver, platinum and copper) and nonmetal minerals such as sand and gravel. The value of nonfuel mineral production in Montana peaked at \$685 million in 1988 with higher metal prices. However, the value of production has fallen by 30 percent since then as metal prices have declined. The future of Montana's nonfuel mineral mining industries is closely linked to world metal prices. If metals prices should once again rise to mid-1980 levels, a resurgence in Montana's mining activity can be expected.

A modest amount of coal mining also takes place in Montana. Approximately 40 million tons of coal is removed from Montana mines annually. However, the current rate of coal mining does not begin to tap the extensive reserves available throughout the state. This coal has a low sulfur content that increases its value given the requirements on industry arising from the federal Clean Air Act. Montana's coal reserves are greater by a considerable margin than any other U.S. state. Like nonfuel mining activity, coal mining is closely tied to world energy prices. A major increase in world oil and gas prices would likely lead to expanded coal mining activity in Montana.

Exhibit B

Earnings From Mining Activity - 1993

MDT Financial District	Earnings From Mining Activity 1993 (thousands of dollars)
Montana Total	\$250,100
Northwestern Region	28,600
Southwestern Region	65,300
Northcentral Region	17,200
Southcentral Region	17,300
Eastern Region	54,600

Coal is shipped almost exclusively by rail. Every major mine in Montana is served by the Burlington Northern Railroad. Ninety percent of current production is from the Powder River Region and this is all shipped out of the state by rail.

Overall, the potential for expanded mining activity in Montana is significant. Historical trends suggest that the rate of mining extraction for both nonfuel minerals and coal will likely go through significant swings over the next twenty years depending on changes in world markets. This potential suggests a special challenge for Montana transportation planners. Uncertainty over the duration of potential mining activity expansions makes it more difficult to plan for and justify major transportation system investments that may be needed to support increased volumes of mineral shipments. However, this problem is somewhat mitigated by recent economic diversification in Montana's primary mining communities. With increased diversification, major swings in mining activity are less likely to produce the boom and bust cycle witnessed during the 1970s and 1980s. As a result, long-term transportation needs in mining dependent areas will likely become more predictable.

3. Wood Products

Data compiled by the University of Montana's Bureau of Business and Economic Research indicates the 1993 sale value of Montana's wood and paper products totaled nearly \$1.4 billion. Wood products processing activity is concentrated heavily in the northwestern half of the state (Map 3).

The following factors will affect future demands for transportation (Montana Business Quarterly, Spring 1994 and School of Forestry, The University of Montana)

- **Much lower timber offerings from the National Forests.** The timber industry in the Northwestern and Rocky Mountain Regions of the United States is undergoing a major restructuring that will have transportation implications. Dramatically lower timber offerings from National Forests will influence both the future level of wood products processing and the geographic location of timber harvests. In the late 1980s, more than 510 million board feet per year were harvested from Montana's National Forests. According to the U.S. Forest Service, National Forest timber offerings will likely fall to well under 200 million board feet by the late 1990s.
- **Limited availability of timber on private industrial lands.** Volumes of standing timber on private industrial lands are simply not adequate to counter act make up for the shortfall caused by reduced supply from National Forests. The future of private non-industrialized timber lands is unclear for Montana's future timber supply over the next twenty years. Recently, the harvests from non-industrial private timber lands has more than doubled, compared to the late 1980s. Private land owners are responding to dramatically higher stumpage prices offered over the last two years. Higher stumpage prices are due to a limited timber supply, combined with a strong national demand for lumber products. Provided the national economy remains strong and construction growth continues, it is reasonable to assume price incentives will remain to encourage increased timber sales from private non-industrialized timber lands.

Note: As a result of undisclosed county-level data from the U.S. Bureau of Economic Analysis it is not possible to accurately calculate totals for MDT financial districts.

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A reduction in timber available from Montana's National Forests, combined with a potential increase in timber harvested from private non-industrial timber lands, has implications for the state's transportation system. Timber supply projections prepared by the University of Montana School of Forestry indicate that the total volume of Montana timber shipments will likely decline by at least 25 percent by the end of this decade. The state's National Forests are located primarily in the western regions of Montana. Private non-industrial timber lands tend to be located in the central and eastern regions of the state. Consequently, the anticipated supply shifts will focus future logging and associated transportation needs farther to the east than has been traditional in Montana.

- **The potential for expanded harvests from non-industrial private forest lands.** Current industry trends suggest potential changes in the volume and geographic location of timber processing activity. Most observers of the Montana forest products industry expect some reduction in overall wood products processing activity over the next twenty years. However, the decline in processing activity is not anticipated to be as great as the decline in timber availability. This prediction assumes a continued strong international economy and corresponding strong demand for wood products. As timber becomes more valuable, utilization of formerly unprofitable materials becomes profitable. A national trend towards more value-added local processing of available timber makes it possible to employ more people and higher wood products sales with a lower volume of raw logs. For example, dimension lumber that may have previously been exported to other states or countries for further processing is now more likely to be made into furniture or recreational equipment at the local level, creating new employment and income opportunities.
- **A trend toward increased value-added processing of limited timber supplies.** Montana trends in wood products processing will also lead to changing transportation system demands. In particular, the trend towards increased value-added processing may place increased volumes of wood products on Montana's highways. A survey of industries in the state of Washington found that producers of specialized value-added wood products are considerably more likely to utilize highway transportation to ship products than producers of saw-timber, who are more likely to utilize rail transportation.

Exhibit C 1992 Labor Earnings in Montana

Manufacturing Industry	Labor Earnings 1992 (millions)	% of Total Manufacturing Earnings 1992	% Earnings Growth 1990 - 1992
<i>Total Manufacturing</i>	730,994	100.00%	11.07%
Lumber and Wood Products	292,837	40.06%	8.67%
Manufactured Food Products	66,024	9.03%	8.46%
Printing and Publishing	59,051	8.08%	11.23%
Primary Metals	58,685	8.03%	-2.71%
Petroleum and Coal Products	52,595	7.19%	38.79%
Paper Products	39,231	5.37%	10.96%
Miscellaneous Manufacturing	31,231	4.27%	49.57%
Stone, Clay and Glass	28,937	3.96%	8.48%
Chemical Products	21,870	2.99%	5.02%
Fabricated Metal Products	17,054	2.33%	7.00%
Machinery and Equipment	16,335	2.23%	-4.37%
Apparel and Textile Products	13,200	1.81%	23.72%
Furniture and Fixtures	8,308	1.14%	45.04%
Instrument Products	7,779	1.06%	36.21%
Electrical Equipment	6,264	0.86%	-22.38%
Motor Vehicles	5,180	0.71%	10.87%

Source: U.S. Bureau of Economic Analysis

Industry trends suggest a potential decentralization of timber processing activities. Specifically, reduced timber supplies in the west, combined with potential increased supplies in the eastern half of the state, provides incentive for relocation or development of processing facilities farther to the east than traditional processing centers. The site requirements of potential new value-added wood products manufacturers enable owners to choose locations outside of traditional wood manufacturing regions.

Overall, wood products industry trends suggest significant changes in long term transportation use. Most important is the potential shift from concentrated activity in western counties to locations in central and eastern Montana. Timber processing facilities are likely to be more dispersed, thereby reducing wood product volumes within western regions and increasing traffic volumes on highways in central and eastern Montana. Provided that Montana follows the national trend towards more value-added wood processing, the reliance on highways for wood products shipments will increase, while the reliance on the rail system will decrease.

4. Diversified Manufacturing

The U.S. Bureau of Economic Analysis estimates 1992 Montana labor earning from manufacturing activities at nearly \$731 million dollars. Lumber and wood products is the dominant Montana industry, providing 40 percent of the total manufacturing earnings. The remainder represents a diversified group of manufacturers ranging from sugar beet processing to primary metals to petroleum refining.

Although lumber and wood products will likely continue to be the largest manufacturing industry over the next twenty years, the data points to a trend towards increased economic diversification. Petroleum and coal products, furniture and fixtures, instrument products and apparel are examples of Montana's fastest growing manufacturing industries.

In general, Montana manufacturing activity is concentrated in urban centers. In 1990, Montana's seven major urban counties accounted for nearly three-quarters of the statewide manufacturing activity. Measured by 1990 annual earnings, Flathead and Missoula have the largest concentration of manufacturing activity.

Long-term economic projections for Montana indicate a trend towards decentralization of manufacturing activity over the next twenty years. Manufacturing earnings in Montana's rural counties are expected to grow at an annual rate three times that of urban counties between 1990 and 2010. Consistent with general economic trends of the state, rural counties adjacent to urban areas typically are among the fastest growing manufacturing centers. However, a number of more isolated counties such as Sheridan, Custer, Phillips and Roosevelt Counties are also projected to experience rapid growth over the next twenty years.

Exhibit D Montana Manufacturing Earnings, 1990 - 2010

	Manufacturing Earnings 1990	Manufacturing Earnings Projected 2010	Annual % Change 1990 - 2010
Montana Total	561.8	728.8	1.49%
Urban County Total	405.8	485.8	0.99%
Cascade	23.2	5.7	-3.77%
Flathead	109.8	135.8	1.18%
Gallatin	33.3	59.4	3.92%
Lewis & Clark	20.9	22.2	0.31%
Missoula	113.4	141.2	1.23%
Silver Bow	13.6	15.2	0.59%
Yellowstone	91.6	106.3	0.80%
Rural County Total	155.8	243	2.80%

Source: National Planning Association Data Services

Montana's decentralization of manufacturing into more rural areas is consistent with national trends. Rapidly growing manufacturing industries tend to be based on relatively small value-added products that can efficiently be produced outside of major urban centers. Location near major markets and suppliers is becoming less important for manufacturing industries than in the past. The labor force limitations of rural counties is less of an issue because new plants tend to be relatively small. The rise of advanced information technologies enable plant managers to communicate with remote markets from almost any location.

The potential for an increased level of diversified manufacturing, with a particular focus on new development in rural counties, is again an indicator of increased future truck volumes on rural highways. The greatest increases in truck traffic will likely occur in rural counties adjacent to established metropolitan areas across the southern tier of the state and in the areas of Ravalli, Lincoln, and Flathead Counties. Access to quality air transportation in rural counties will also become more important because many of the growing rural manufacturers sell to national and international markets.

B. Montana's Service Economy

Service businesses include personal and business services such as health care, data processing, and legal services; financial services such as banking, insurance, and retail and wholesale trade. Wage, salary and business profits earnings from private service enterprises has grown steadily in Montana since the mid 1970s. Earnings from service-related businesses continued to grow while Montana's timber, mining and agricultural industries staggered during the late 1970s and early 1980s. Services are projected to grow at a rapid pace over the next twenty years.

The rapid growth of the Montana service economy mirrors national trends. A considerable proportion of this service growth is due to an aging and more affluent population, a growing demand for business support services, and an expanded concern for environmental quality. Health and elderly care, for example, are at the top of the list of growth industries in Montana and the nation as a whole.

Montana's service sector benefits from significant growth in tourism and recreational travel. The University of Montana's Institute for Tourism and Recreation Research estimates that more than 6 million nonresidents entered Montana by car in 1993, an increase from 4.5 million during the mid-1980s. Montana airport deboarding also grew substantially during the past three years to reach nearly one million in 1993.

Montana's National Parks and ski resorts are among the most popular travel and tourism destinations. Visitor counts at both National Park and ski areas increased steadily during the 1990s.

County level accommodations tax collections are compared in Map 5. Accommodations tax collections are one measure of the regional focus of travel and tourism in Montana. Three Montana Counties (Flathead, Gallatin and Yellowstone) had accommodation tax collections in excess of one million dollars in 1993. Each of these counties are a center of business and tourist travel. The two most western MDT financial districts account for nearly two-thirds of accommodations tax collections.

Nonresident travel and tourism is expected to grow over the next twenty years. Several trends including a growing population in the United States and Canada with increased leisure time and a new international interest in the Native American Culture will contribute to continued growth of tourism. As Montana's economy continues to grow, additional business travel should be expected. However, the extent of future growth is closely linked to both national and

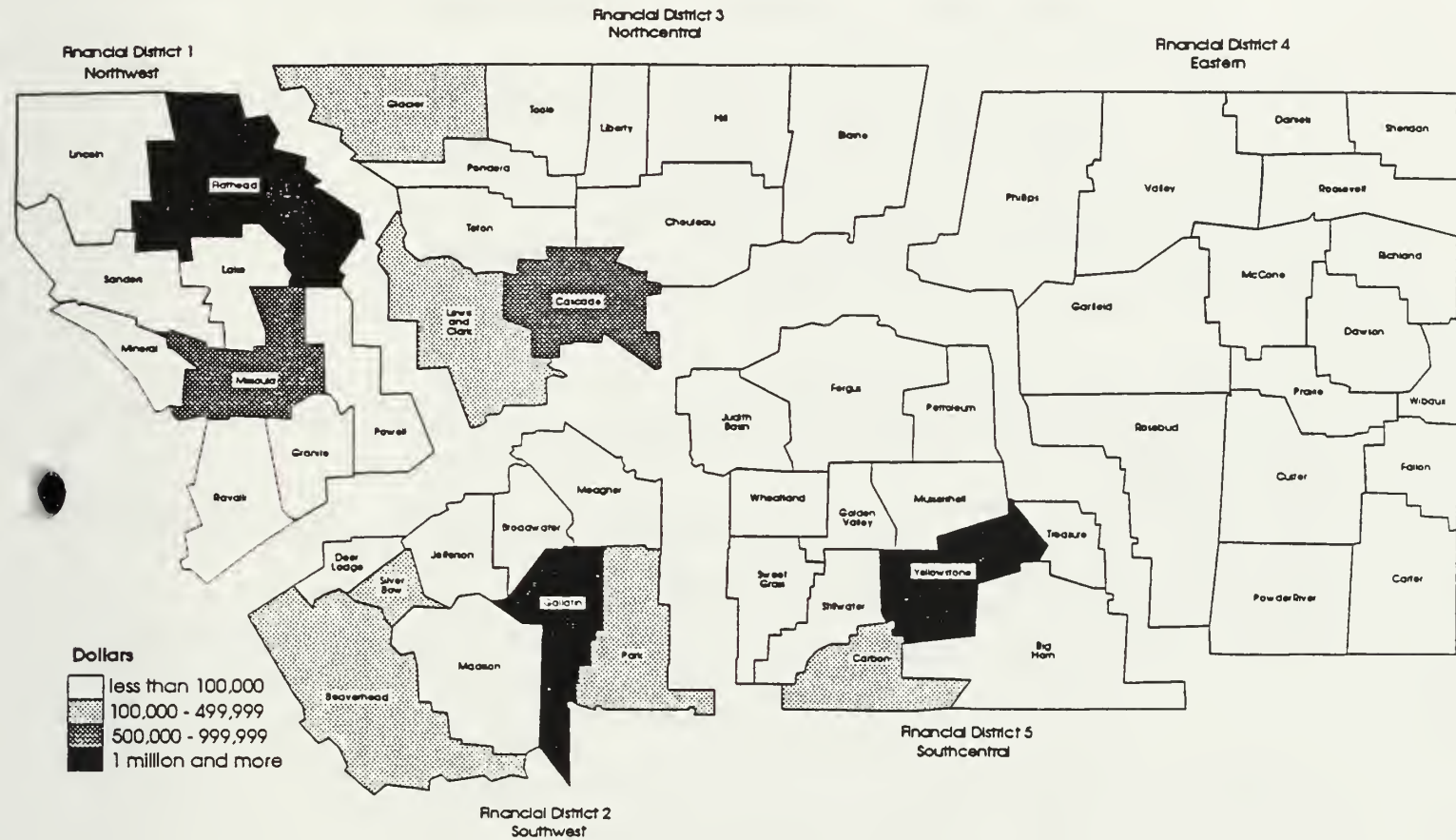
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international economic trends. For example, international exchange rates, particularly with Canada, make it less attractive for Canadians to visit the United States. In times of national economic recession, Americans have less discretionary income to spend on tourism and business travel is more limited. Consequently, nonresident travel in Montana is expected to go through modest upswings and downswings over the next twenty years but will generally continue at a rate similar to that of the past five years.

The growth of Montana tourism raises issues for statewide and regional transportation planning. In particular, as visitor numbers increase, traffic volumes on key routes utilized by tourists also increase. Issues of congestion and potential safety problems may become more prevalent, particularly for destination areas served by secondary roads.

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Map 5
 Accommodations Tax Collections, 1991



Source: Montana Department of Commerce

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II. MAJOR ECONOMIC DEVELOPMENT ISSUES

Montana's transportation system is a key factor affecting economic development. Although the system generally works well, there are a number of opportunities available to enhance its link to economic development.

The major transportation related economic development issues that confront the state as it moves into the twenty-first century are:

- Ensuring access between rural areas and the state, national, and international economies.
- Supporting local economic development.
- Helping Montana benefit from increased international trade.
- Supporting tourism development.

These issues are discussed below in the context of their implications for the transportation system.

A. Ensuring Access Between Rural Areas and the State, National, and International Economies

Montana is primarily a rural state with several major regional service centers. Access throughout the State to the transportation system is important because the economy is dependent upon access to external markets. For example, the agricultural sector, the foundation of Montana's export base, is reliant upon out of state markets. Statewide, agriculture generates \$2 billion in annual cash receipts, the largest income producing industry in Montana (Bureau of Business & Economic Research, 1994 Economic Outlook Seminar). Providing the infrastructure that enables these products to be efficiently shipped to out of state markets is a critical economic development function of the transportation system.

1. Preservation and Maintenance of the Primary and Secondary System

The preservation of the primary and secondary rural highway system is important for economic development. Preserving this system is a prerequisite for maintaining access to and from rural areas. Preservation and maintenance improves system efficiency and indirectly encourages job retention. It can also help to direct new development.

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Targeting capacity improvements to primary routes and providing essential maintenance to secondary routes allows the state to increase public benefits in a cost effective fashion. Economic change and development pressure often creates infrastructure needs. From an economic development perspective, successful infrastructure projects are those that anticipate and respond to market needs.

2. Maintaining Existing Levels of Air Transportation Service

In recent years, Montana has experienced considerable change in the availability of air transportation services. The provision of commercial service is determined by market demand, with the exception of communities receiving Essential Air Service subsidies (Montana State Aviation System Plan, 1989). Larger cities have experienced increased demand and are coping with higher traffic (The 1994 Outlook for Travel and Tourism in Montana), while many smaller cities struggle to retain existing service.

Many small cities and rural areas, especially those in the northeast part of the state, are concerned about the potential loss of air service. There is a need to maintain air transportation services to support economic development. Good access to air transportation is usually a necessary but not sufficient condition affecting economic development in rural areas. Airport access is especially important for niche marketing, "just-in-time" manufacturing, and the growing tourism industry. Moreover, the quality of air transportation service can influence business investment decisions.

3. Preventing Further Branch Rail Line Losses

Rail continues to be an important mode of transport in Montana, its bordering states, and Canada. Montana's freight rail system has experienced ownership consolidation, minor increases in freight traffic, and nearly 1,400 miles of line abandonments over the past decade (1993 Montana State Rail Plan Update).

Montana's agricultural, mining, and forest products are major economic sectors that require rail transportation for shipments. Therefore, it is important to maintain existing levels of rail service throughout the state. Montana's basic economic sectors rely on freight rail and trucking for shipping bulk commodities.

Branch rail lines are an important asset to Montana because they connect isolated communities, whose economies are often based upon one

industry, to the main line rail system. The threat of further route abandonment persists as carriers seek operating efficiency, yet many branch rail lines that are not currently profitable may prove to be valuable to the state's economy in the future. This appears evident given the parallel between freight rail traffic and the cyclical nature of natural resource based industries.

4. Maintaining Passenger Rail Access

Passenger rail ridership increased overall in Montana by 16,000 persons between 1990 and 1993, an increase of over thirteen percent statewide (Amtrak, Office of Government Affairs). Passenger rail in Montana is the sole alternative to automobile travel in several communities. The bulk of the ridership increase was tourism-related, occurring at Whitefish and Glacier Park. Between 1990 and 1993 ridership at these stations increased by 18,215 boardings and deboardings, or 31 percent. Ridership at the other stations has been stable or declining. Moreover, "...Amtrak provides many business owners delivery service. Shipments of medical and pharmaceutical supplies, fresh cut flowers, small farm parts for implement dealers and other shipments of package and express items are delivered daily by train. During severe weather, it is virtually the only means of travel in the northern portion of the state" (1993 Montana State Rail Plan Update).

B. Supporting Local Economic Development

Community vitality often depends upon economic diversification. Many communities in Montana are actively seeking to diversify their economies because of the "boom and bust" nature of the traditional basic industries and the need for additional job opportunities. Local economic development strategies vary; some target small businesses or retirees, many seek to develop value-added industries or tourism. Each type of industry has distinct transportation needs that can be supported by efforts ranging from high profile highway signage to lure traffic into small tourist-oriented towns, rail to retain bulk commodity related activities, or airport facilities and services that help to develop industrial land.

Transportation investments are costly, yet commonly have significant economic development implications. Aside from new highway construction, several strategies and relatively minor actions may induce new investment, and ultimately economic growth. Some economic development-related transportation investments that are applicable for MDT consideration follow:

1. Signage to Promote Local Features

A key component of tourism related economic development is signage. Without sufficient notification, communities are often invisible to the tourist-traveler unless they are a pre-determined destination. Therefore, it has become relatively common on interstate routes to advertise or notify travelers of local attractions and attributes. However, similar signage is uncommon on most state highways and local routes.

2. Rest Areas in Communities

Isolated rest areas are normally quite expensive to maintain. Therefore, in recent years, six Montana communities participated in a city parks and rest areas program. Under this program, funds generated by the motor vehicle fuel tax were allocated to local communities to pay for the construction of rest areas along state highways.

Rest areas were built through the city parks and rest areas program using \$100,000 of state funds per rest area. In many cases local communities provided in kind resources through volunteer time to assist in development. These costs contrast with the \$500,000 to \$900,000 common to interstate rest areas built using federal funds. Once built, maintenance of the facilities became the responsibility of the local jurisdiction.

From the state's perspective, community park based rest areas resulted in a cost savings and improved facilities. Economically, the program benefited local communities by indirectly attracting commerce. In general, the city parks and rest areas program was very successful until funding was cancelled by the State legislature. A backlog of qualified localities remains.

3. Providing Infrastructure to Attract Industry

Accessible quality infrastructure is unquestionably an important component of business location decisions. However, infrastructure construction is costly and the benefits realized from speculative building can be minimal. Therefore, it is important to match the system to expected growth.

The provision of infrastructure to support economic development is often best targeted to areas that are growing rapidly and show potential for continued progress. This is commonly done by expanding capacity on key surface routes, up-grading rail facilities, and improving airport access. Montana appears to have responded well to economic development related

infrastructure needs in recent years. Because of the competing demands of local jurisdictions for economic development related improvements, care must be taken to avoid the speculative provision of transportation infrastructure in hope that it will generate economic development.

C. Helping Montana Benefit from Increased International Trade

International trade could effect Montana considerably because of the State's geographic situation. Being a border state, Montana will most likely experience freight traffic growth as United States' trade with Canada increases.

There is an expectation that Montana's economy can benefit from increased volumes of international trade by investing in the transportation system. However, the extent of these benefits must be weighed against the costs of new investments. Most recent investment has been directed towards truck routes and corridors. From the rail industry's perspective it is unlikely that there are rail-related economic benefits to be gained in Montana as a result of international trade. What is most significant for Montana is whether infrastructure improvements will facilitate economic development in the state or whether they will merely help trucks pass more quickly and efficiently through the state.

1. Development of Intermodal Transfer Facilities

Intermodal transfer facilities are ports, stations, or terminals, where goods are transferred from one mode of transport to another. "Moving freight by two or more modes in an integrated manner is a practical definition of intermodal transportation" (Transportation and Iowa's Economic Future). For example, lumber might be transferred from logging trucks to trains for long-haul shipments. The Intermodal Surface Transportation Efficiency Act (ISTEA) advocates the development of these facilities to enhance existing transportation systems.

The expansion of intermodal transfer facilities presents Montana with several benefits that will not be realized without costs. Theoretically, intermodal transfer facilities would increase the competitive ability of the state to attract shipping companies and improve the overall efficiency of the freight system. It is argued that Billings is a prime strategic location for the development of a major trucking center that could serve north-south trade between the United States and Canada (Montana Tradeport Authority, 1994). However, freight traffic associated with an intermodal facility could generate more costs to the state than benefits if there is insufficient demand, it is poorly designed and/or located. While transfers might still take place within the state, the quantity of through traffic could

result in more wear on roads than could be recovered from user fees and vehicle taxes. Any state involvement in intermodal transfer facilities needs to be based on a careful evaluation of the benefits and costs that can be anticipated. A determination should be made regarding whether there is a viable "market" for the facilities through working with interstate shippers.

2. Improvements to Border Crossings

Recent changes in Montana's economy, regional growth in the Canadian provinces of Alberta and Saskatchewan, and national trends suggest that traditional flows of trade are changing. The North American Free Trade Agreement, and the General Agreement on Tariffs and Trade have increased north-south goods movement between the United States and Canada, and between the United States and Mexico. There is increased trade through Montana, making the state's border with Canada more active.

The physical condition of border crossings between Canada and Montana is a concern. For example, the Sweetgrass-Coutts border crossing, located on Interstate 15, has not been improved since the 1930s. Despite being the busiest crossing in Montana, the lack of modernization regularly causes delays and tends to inhibit trade (Governor's Trade Advisory Council, 11/16/93). This crossing is of particular importance because it "...handles between 60 to 70 percent of Canadian exports in the [Rocky Mountain] region and over 55 percent of U.S. exports. This amounts to \$2 billion in two-way trade by commercial vehicles, up 38 percent or \$555 million since 1988" (Assessment of Border Crossings and Transportation Corridors for North American Trade, 1993).

The importance of addressing the efficiency of border crossing facilities is reflected by the potential for economic development. Increased border efficiency would result in overall efficiency gains for Montana's transportation system and be a key element in increasing the market for any intermodal facilities in the state.

3. Participation in Efforts to Develop International Interstate Trade Corridors

Many constituents and interest groups within the State argue that the development of a trade corridor between Canada and Mexico that passes through Montana could be beneficial (Governor's Trade Advisory Council, 1/18/94). The rationale for participation in trade corridor initiatives is

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that Montana is well positioned geographically to benefit from increased north-south trade that is expected to occur between Canada, the United States and Mexico. Participation in trade corridor initiatives, it is argued, would position the State so that it benefits from the increased flow of trade. Montana's geographic location as the northern-most state through which Interstate 15 passes presents a potential source of economic development.

A key consideration for Montana is whether the state would benefit from increased trade and associated truck traffic. Developing an international trade corridor serving a national function would create added infrastructure costs because of the impacts of increased truck traffic on pavement conditions. Therefore, evaluation needs to consider this issue. In addition, through traffic has a less beneficial economic impact than freight movement that stops. An evaluation needs to address the relative costs and economic development benefits of more through traffic and the extent of other economic benefits generated by infrastructure improvements.

D. Supporting Tourism Development

Tourism continues to grow in Montana. The Department of Commerce has a major economic development focus on tourism. The economic development and transportation aspects of tourism are significant, particularly in rural areas. From a transportation perspective, the majority of tourism's impact is centered on automobile and air travel, which relies primarily on the convenience of access to scenic destinations, although, Glacier National Park in the summer and Big Mountain Ski Area in the winter, are also accessed by passenger rail.

Tourism benefits to the Montana economy are significant. "Tourism over the last decade has out-paced all other natural resource-based industries. The [Montana] Department of Commerce estimates the tourism industry already directly or indirectly created 33,000 new jobs and will create thousands more before the year 2000" (Montana Business Annual, March/April 1994).

A key trend affecting tourism is the decrease in the length of vacations and increase of international visitors. In addition, other regions aggressively compete for tourist dollars. These trends create the need for good transportation access. Continuing to meet tourist related transportation needs will help support Montana's economic development goals.

The following discusses the types of activities that the MDT could undertake that would benefit tourism:

1. Management of Corridors to Reflect Tourist Needs

Tourism travel in Montana is concentrated in several surface corridors, primarily in western and southwestern portions of the state. While these corridors are sufficient for local traffic during off-peak periods of the year (spring and fall), seasonal congestion is common.

Congestion can act as a deterrent to tourism. Areas that are heavily reliant upon tourist trade will most likely suffer if congestion becomes regular in their communities. There are also tourist related safety needs. Identifying and addressing tourist related needs at a corridor level could support economic development.

2. Enhancements to Improve the "Tourist Experience"

Tourist-related economic development is affected by the quality of the "tourist experience" offered. The most important components affecting the Montana "tourist experience" are convenience and aesthetics. Given that the majority of tourists visit the state to enjoy its scenery and outdoor activities, efforts to improve the quality of tourist corridor routes and access to recreation sites is important.

Of particular significance to TranPlan 21 is that driving for pleasure is a major component of tourism. The Forest Service notes that "driving for pleasure" is the most frequent recreational experience of visitors to the National Forests. Therefore enhancements that ensure good connections between the statewide highway system, county roads, and forest roads can facilitate tourism and recreation. This requires coordination between the MDT, the local road agency, and the Forest Headquarters responsible for the particular National Forest. Improving connections would require identifying and signing access routes.

Tourism-related economic development depends upon tourists spending money in local economies. Indicating the services available in communities located along Interstate routes draws tourists and assists development. While this principle appears to work well in these communities, the concept has not been applied to non-interstate routes. Furthermore, the signage that currently exists is service oriented, but often does not indicate the non-commercial historical attractions of communities that might induce tourists to stop.

Other components important to the Montana "tourist experience" are based upon improving public facilities along tourism routes. These include rest areas, picnic areas, pull-outs at scenic vistas, areas designated for wildlife watching, and others.

3. Environmental Degradation that Could Impact Tourism

Montana markets its scenic beauty, national parks, rustic character, and plethora of outdoor activities. The level of transportation system maintenance has an impact upon the perception of tourists and the impression left. Therefore, litter collection and other maintenance functions are important components of tourist development.

III. ADOPTED POLICY GOALS AND ACTIONS

The policy goals and planning actions that will be implemented by the MDT to address the issues and perceived needs described in the preceding sections are outlined below.

A. POLICY GOAL A. Promote a transportation system that provides cost effective access for Montana's export oriented ("basic") industries to regional, national, and international markets.

Economic growth in Montana is dependent upon its export base, which relies on the transportation system for delivery of goods and services to markets external to the state. The MDT will seek to construct and manage a transportation system that guarantees "basic" export-oriented industries access to external markets in neighboring regions, the nation as a whole, and the global marketplace.

ACTION A.1. Work with shippers and private providers on a continuing basis to identify barriers to be overcome and transportation improvements that will enhance access to regional, national, and international markets.

This action involves surveying a sample of shippers and private transportation providers annually to identify the most significant trade-corridor needs, regulatory constraints inhibiting trade, and other issues. The results of the survey will also be used to measure transportation system performance. By engaging in an ongoing process, the MDT will be able to adjust policies to reflect the needs of the market in a timely fashion. Establishing an interactive relationship between the MDT and its constituents will increase the potential for system efficiency and related economic development. A questionnaire will be used to survey freight transportation interests. Results from these meetings will be an input to the

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Intermodal Management System and program development. In addition, the survey will allow the MDT to measure their success in addressing priorities.

Level of Effort

Initial Year 1: 320 Staff hours to design a survey instrument (questionnaire) and the survey sample. Each year the survey will be administered and the results tabulated.

Annually: 120 Staff hours

Timing: Twelve month intervals beginning January, 1995

ACTION A.2. Prioritize support for "basic" industries as a criteria in programming and project selection.

This involves considering the role the transportation system plays as an infrastructure supporting the basic sectors of the economy as a criteria in programming and project selection decisions.

Level of Effort

Initial Year 1: 40 staff hours. Staff effort to incorporate into programming and project selection process.

Annually: Minimal. The action will be incorporated into current programming and project selection process.

Timing: Ongoing as part of program development.

ACTION A.3. Work with commercial air carriers to maintain and enhance existing levels of service.

Recent years have witnessed a decrease in commercial air service, in Montana. Although this has been a response to deregulation and changes in the organization of the air carrier industry over which the MDT has little influence, the Department will work with carriers to identify service problems before they occur. A proactive approach to maintaining existing levels of air service is important to the state's economy because of the important economic role of air transportation.

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This action involves the Division of Aeronautics acting as a facilitator and promoter of commercial scheduled air service in Montana. This role will identify critical issues that inhibit commercial service that can be addressed by government. This activity has already begun to take place in some areas, for example the Division has been active in encouraging Frontier airlines to initiate scheduled service.

Level of Effort:

Initial Year 1: 160 to 200 Staff hours

Annually: 160 to 200 Staff hours

Timing: Ongoing communication with commercial air carrier representatives already takes place

B. POLICY GOAL B. Ensure state and local economic development policies, plans and priorities are factored into transportation planning and programming.

Promoting economic development is a high priority for Montana state and local governments. The management and development of the transportation system will support the economic development activities of these governments. Therefore, several steps will be taken to coordinate the MDT's public interests with those of private enterprise.

ACTION B.1. Hold annual meetings with Department of Commerce regional development officers to discuss and review long-range plans, identify local and regional industries, infrastructure concerns, and transportation impediments (if any).

This action will increase the MDT's understanding of transportation-related economic development needs. Coordinating the state and regional transportation needs perceived by the Department of Commerce with the MDT will increase the awareness of local needs, perceptions, and problems. By gaining a better understanding of local and state-wide economic development issues, the MDT will be better able to assist in the facilitation of business retention and expansion. In turn, the Department of Commerce will better understand the MDT's planning and project development activities. In short, improved communication between commerce and transport will benefit the state through an improved awareness of transportation related issues that effect development.

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The Department of Commerce addresses economic development at the regional level. Therefore, one meeting will take place in each region involving the District and the appropriate Headquarters Staff.

Level of Effort:

Initial Year 1: 80 total staff hours to initiate annual meetings to identify short term issues and long term directions of the MDT and Department of Commerce affecting economic development.

Annually: 60 hours

Timing: Initiation in 1996. Current economic development issues already documented by TranPlan 21.

ACTION B.2. Factor state and local economic development program priorities into the programming process.

This involves coordinating decision making for funding economic development and transportation improvements. To implement this recommendation it will be necessary to include the contribution to economic development as a criterion for project selection or as part of the programming process.

Level of Effort:

Initial Year 1: 40 to 60 staff hours initial effort to determine how to incorporate development goals into MDT's programming process.

Annually: Minimal, the action will be incorporated into the current programming process

Timing: Ongoing, beginning in 1996.

ACTION B.3. Establish a new city park and rest area Program to encourage visitors to contribute to economic development.

This action initiates a new city park and rest area program, if approved by the legislature. In the past this program was highly cost effective, producing indirect spill-overs to benefit cities and towns. It involves the construction of rest-stop facilities in municipal areas, rather than in costly isolated locations. Locating rest stops in municipal areas will reduce vandalism, common at isolated locations, while pulling travelers into communities. This will also reduce the direct costs

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to the state of providing rest facilities by over 50 percent, while indirectly producing positive effects on local trade and commerce.

Level of Effort:

Initial Year 1: Staff 240 hours to initiate program. Initiation will involve establishing a process for selecting projects. Level of capital funding will depend on priorities although past efforts averaged approximately \$100,000 of state funds per site.

Annually: 200 hours to manage program until program funds exhausted. Among the funding questions are whether enhancement funds will be used, and if other non-MDT funding sources are available.

Timing: Dependent upon availability of funding.

C. POLICY GOAL C. Engage in multistate and regional initiatives that facilitate international trade.

The increased role of international trade in the national and Montana economy and the passage of the North American Free Trade Agreement increases the importance of integrating the state into the national and international economy. It also creates an opportunity for helping Montana to improve its local economies and benefit from increased volumes of trade passing through the State.

ACTION C.1. Participate in an examination of multistate trade corridor initiatives.

There are a number of competing trade corridor initiatives on a national and regional level sponsored by both public and private interests. Neighboring states are positioning themselves to compete for designation as an international trade corridor. The MDT will cautiously collaborate in efforts with other states to determine the nature of demand for a corridor, to weigh the benefits against the costs, and to determine whether the development of an interstate trade corridor passing through Montana is good for the State.

In determining whether to contribute existing funds into the implementation of a trade corridor, Montana will ensure that any benefits outweigh the additional costs that increased use would place on the highway system. Without intergovernmental coordination among neighboring states, the federal government, and the respective departments of transportation, a trade corridor will be difficult to implement

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successfully. Moreover, standardized regulations appear important across state lines and international boundaries with Canada and Mexico for efficient shipping on a potential trade corridor.

At the regional level it will be necessary to improve the physical and administrative infrastructure present at the United States-Canadian border.

Level of Effort:

Initial Year 1: 200 - 400 hours to coordinate MDT planning and programming efforts with the USDOT and Canadian provincial governments. A study process to determine the level of need, extent of physical improvements required, and construction will be necessary. Regulatory barriers and restrictions will be identified and required legislative changes specified.

Annually: To be determined.

Timing: 1997, after results from the Western Association of Highway Transportation Officials (WASHTO) Western Trade Network Study becomes available.

ACTION C.2. Coordinate with planning undertaken by Canadian Provincial Governments of Alberta and Saskatchewan.

This action involves meeting annually with transportation planners in neighboring Canadian provinces. Planning and actions undertaken north of the United States border are important to Montana, especially if Canada becomes active in a trade corridor effort. System continuity will be ensured and planning actions coordinated to the extent possible.

The MDT will coordinate planning in the northern portions of the state with efforts across the border to ensure system continuity.

Level of Effort:

Initial Year 1: 200 hours

Annually: 60 hours

Timing: Initiate in 1995 or 1996.

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D. POLICY GOAL D. Promote tourism and access to recreational, historical, cultural, and scenic destinations through transportation planning and programming.

Tourism continues to grow as a vital component of the Montana economy. Ensuring the future growth of tourism will require a careful blend of planning and programming to ensure a compatible match of capacity and aesthetic appeal. This balance will be particularly difficult given that the majority of visitors come to enjoy the scenery. However, the policy actions that support tourist-related economic development through the management of the transportation system are identified below.

ACTION D.1. Implement the recommendations of the scenic byway feasibility study.

It is important to note that there is a minimal amount of federal funding left to finance scenic byways programs now that the demonstration projects have been funded.

Level of Effort: To be determined

ACTION D.2. Prioritize and encourage the development of transportation enhancements that promote tourist access.

This action encourages local jurisdictions to prioritize tourism related transportation enhancements in the selection of Community Transportation Enhancement Program projects.

Level of Effort:

Initial year 1: Staff effort, 360 hours to develop, administer and communicate new information about the enhancement program

Annually: 120 hours to manage program

Timing: Initiate in 1995

ACTION D.3. Encourage more tourist oriented directional signing.

This action will assist local communities to promote tourist attractions and local businesses, and prevent the proliferation of billboards obstructing views in scenic corridors

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Traditionally, it has been the MDT's responsibility to regulate and monitor road-side advertisements or signage. An expansion of this role to replicate interstate signage on state routes will take place. Directional signs, similar to those found on interstate routes, will prove to be a good compromise to minimize conflict between billboards and scenic views that appeal to tourists.

Level of Effort:

Initial Year 1: Incorporate as part of existing tourist oriented directional signing program activities

Annually: Incorporate into on-going work activities

Timing: Initiate immediately

ACTION D.4. Minimize negative impacts of billboards by implementing recommendations from the Governor's Outdoor Advertising Task Force.

Tranplan 21 recognizes that in a number of key transportation corridors there is a major billboard proliferation problem. The billboards degrade the view shed and negatively affect Montana's image and hence impact tourism. The Governor has established a task force to address these issues and this will provide a mechanism for addressing the billboard concerns identified through TranPlan 21.

Level of Effort:

Initial Year 1: Dependent upon Task Force recommendations

Annually: Dependent upon Task Force recommendations

Timing: After adoption of Governor's Task Force recommendations.

ACTION D.5. Maintaining community character that enhances tourism and local economic development will be considered as part of project evaluation.

The image and nature of the business present in portions of tourist oriented communities is a key component of their success. To support economic development goals the MDT will make efforts to incorporate these concerns into planning and programming so that the local economy of tourist towns is supported by transportation improvements.

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Level of Effort:

Initial Year 1: 140 staff hours to develop guidelines and review at the district and local levels

Annually: Minimal, will be incorporated into existing business practices.

Timing: Priority within first three years of plan implementation.

IV. POLICY GOALS AND ACTIONS NOT ADOPTED

ACTION A.4. Ensure that highway capacity improvements and projects have a positive benefit-cost ratio (based on direct capital and maintenance costs compared to user benefits).

Reason Not Chosen: If implemented this action would result in treating capacity-related economic development projects differently than other capacity improvements. In addition, there is concern that it is analytically difficult to agree on the costs and benefits of individual projects.

This action restricts all nonsafety-related planned capacity improvements to projects with a positive benefit-cost ratio. This will ensure that they contribute to Montana's economic well being. Given the anticipated funding levels, the state of Montana has scarce resources for expanding the system. However, it is necessary to ensure that any new capacity improvements contribute to economic development. The action will serve as an initial criterion for considering capacity improvement.

The analytical procedure will be restricted to contrasting the cost to government and the benefits to transportation users. The procedure will be limited to direct costs and user benefits and the economic ripple of faster travel times and enhanced reliability. This excludes non-monetary external costs called externalities (a cost is external if it is not paid by the person who imposes it). These costs cannot be readily quantified. They include environmental costs, and aesthetics among others. The weight or value attached to these reflects individuals' and communities' values. They will be addressed as part of the project review process and are a required part of environmental impact statements.

There are a number of analytical procedures that are available for evaluating benefit-cost ratios for highway and rail improvements. This action identifies a straight forward procedure applicable to Montana. On the highway system, the Highway Performance Monitoring System and the Highway Economic Reporting System provide a good starting

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point. The Montana State Rail Plan describes a procedure developed by the Federal Rail Administration for evaluation of the benefit-cost of branch line improvements.

Level of Effort:

Initial Year 1: 500 to 600 staff hours to establish a methodology and training staff to apply the methodology as part of the project selection process.

Annually: Minimal net increase in staff time to incorporate the determining benefit-cost into the project.

Timing: The timing for undertaking the initial year activity will be dependent upon the relative priority attached to this action.

V. REFERENCES

Amtrak, Office of Government Affairs. Ridership Statistics, 1987-1993. [spreadsheet], Washington, D.C.

"Assessment of Border Crossings and Transportation Corridors for North American Trade: Report To Congress". U.S. Department of Transportation, Federal Highway Administration. (Washington, DC: 1993).

"Arizona Trade Corridor Study: Strategic Options for Economic, Social and Infrastructure Development in Arizona". Arizona Department of Transportation, The University Consortium, and Hickling Corporation. (July, 1993).

"Report for the 1994 Economic Outlook Seminar." Bureau of Business and Economic Research. (Missoula, MT).

The 1994 Outlook for Travel and Tourism in Montana. Institute for Tourism and Recreation Research. (1994).

1993 Montana State Rail Plan Update. Montana Department of Transportation, Rail and Transit Division. (Helena, MT: June, 1993).

Montana State Aviation System Plan. Montana Department of Commerce, Aeronautics Division. (Helena, MT: February, 1989).

Discretionary Program for Highway Infrastructure and Intermodal Transportation Facility [concept paper]. Montana Tradeport Authority, Center for Business and Community Development. (Billings, MT: March 11, 1993).

POLICY PAPER

Intermodal Surface Transportation Efficiency Act of 1991.

David Forkenbrock, Norman Foster, and Michael Crum. Transportation and Iowa's Economic Future. (University of Iowa, Iowa City, IA: 1993).

Governor's Trade Advisory Council. Summary of Proceedings, Public Hearing. (Great Falls, MT: November 16, 1993).

Governor's Trade Advisory Council. Summary of Proceedings, Public Hearing. (Billings, MT: January 18, 1994).

Katherine Shandera. Montana Business Annual. (Missoula, MT: March/April, 1994).

Montana Department of Transportation

TranPlan 21



FREIGHT MOBILITY

Policy Paper

prepared by

DYE MANAGEMENT GROUP, INC.

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I. FREIGHT MOBILITY IN MONTANA - BACKGROUND

This policy paper includes the policies and actions adopted for managing and investing in Montana's transportation infrastructure to ensure freight mobility. Freight mobility is critically important to Montana's economy. The role that freight transportation plays in economic development and the mechanisms through which the management of, and investment in, Montana's transportation system can support economic development are addressed in a separate Economic Development policy paper.

This paper describes the demands on Montana's transportation infrastructure for the shipment of freight and the contribution different modes make to meeting these demands. The principal freight-related transportation issues and policy options for addressing them are assessed.

Freight movement ranging from the shipment of small packages to the movement of bulk commodities such as coal, lumber, or grain is a prerequisite for economic activity. Montana's public and private transportation infrastructure ensures the freight mobility necessary to sustain this economic activity. As background, the economic factors driving the demand for freight movement and the elements of the transportation system that are meeting this demand are described below.

A. Key Characteristics of Freight Mobility in Montana

There are four basic types of freight movement in Montana: exports (from the state to other states and internationally), imports (to the state from other states and nations), movement from origins to destinations within Montana, and shipments that "bridge" (pass through) the state.

1. Freight Exports from Montana

The export of goods and services sustains Montana's economy. However, it is primarily the export of goods that requires freight mobility. Historically, Montana's economic well being has been derived from the exports from its "basic" industries. These exports have involved the bulk shipment of agricultural commodities (mainly grain), forest products, and natural resources, such as coal, out of the state. These basic industries require access to a freight transportation infrastructure that can support the export of bulk commodities.

The state's most significant "basic" industry is agriculture (Bureau of Business and Economic Research, 1994 Economic Outlook Seminar). Grain accounts for a majority of agricultural activity and production, a

commodity heavily reliant upon freight rail mobility. Agriculture and the other basic industries, coal, forest products, and other natural resources, are cyclical industries. The demands they place on the transportation system fluctuate. However, over time they have required a fairly constant transportation capacity that is expected to continue over the planning horizon.

An emphasis of economic development in Montana is the growth of value-added manufacturing, using the bulk commodities produced in the state. Typically, value-added production requires more time sensitive distribution that is dependent upon good highway connections and airport access.

2. Freight Imports to Montana

Bulk imports to Montana primarily include fertilizer and grain shipments from Canada, on route to other destinations. Freight shipped to Montana includes finished (consumer) goods and products, value-added semi-finished goods, parts, packages, and other miscellaneous products.

In common with the rest of the nation, Montana's service sector has experienced rapid growth over the past two decades. Income from health care services and business services in Montana grew over 50 percent between 1987 and 1992 alone. To the extent to which these services are bought by residents from outside Montana or bring income into the state, they contribute to economic growth. The delivery of these services requires the importation of freight, mainly in the form of smaller high value time sensitive packages that use air transportation for delivery.

3. Freight Circulating within Montana

The third type of freight movement involves shipments circulating within Montana. This includes the circulation of goods in urban areas and between urban and outlying rural areas. When urban areas become congested by passenger vehicles, freight circulation is affected. Similarly in rural areas with steep terrain, limited passing opportunities, and increasing traffic volumes, overall congestion can impact freight mobility.

4. Freight Passing through or "Bridging" Montana

Largely because of its geographic location and small population, Montana is a bridge state for interstate truck shipments. This occurs due to interstate commerce shipping goods between the Midwest and the Northwest United States. For over a century, people and goods have travelled from east to west across Montana and the highway and rail systems are oriented to serving these demands. With the passage of the North American Free Trade Agreement there is the expectation that Montana will also serve as a bridge state for international trade between the United States and Canada to the north. However, it is not clear how large the volume of traffic will be because, like the United States, the Canadian transportation system is strongly oriented east-west.

B. Freight Mobility in Montana

Demands for freight mobility in Montana are met by highway, rail, and air transportation modes or a combination of modes. When more than one mode is used to ship freight from origin to destination, the movement is considered an intermodal shipment.

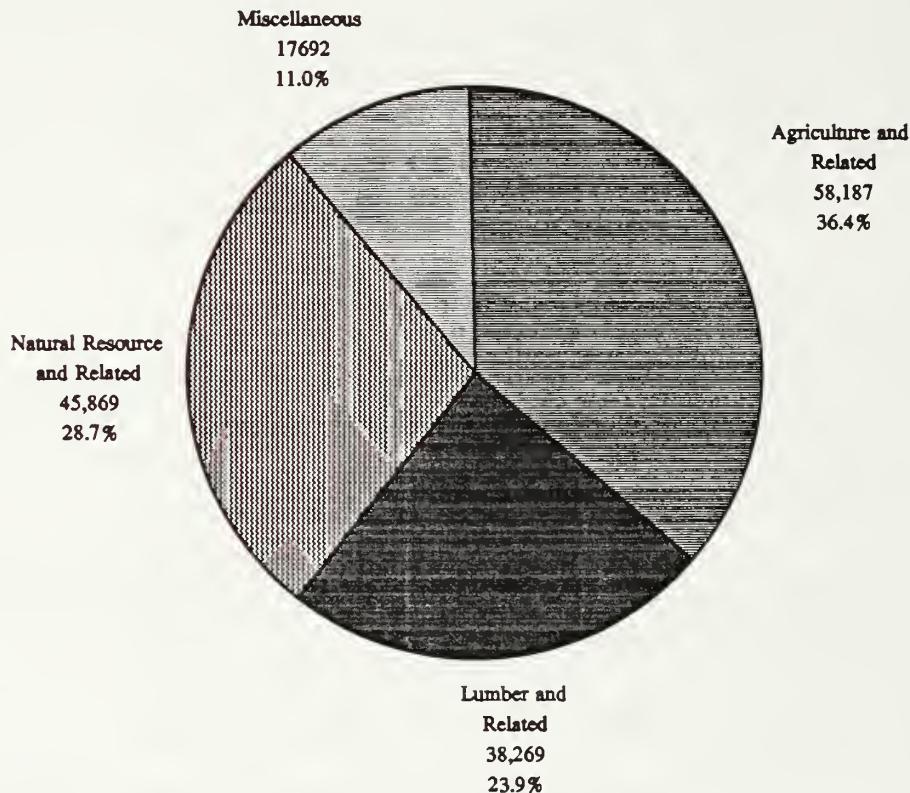
The following briefly describes how the demands for freight mobility discussed above are currently met in Montana. They are described in greater detail as part of TranPlan 21's technical work.

1. Freight Rail

Montana's basic industries and hence the state's economy are very dependent upon rail transportation. In the case of agriculture, 92 percent of Montana's wheat crop is shipped out-of-state by rail (Montana Agricultural Statistics Service) and all coal mined and a large portion of lumber and wood products are exported from Montana by rail. For example, in 1991 the Burlington Northern Railroad shipped 36 million tons of coal at an average of 8.3 trains per day.

Exhibit I shows the volumes of commodities shipped into and out of Montana's freight rail stations. The exhibit excludes coal shipped directly from the Powder River Basin.

Exhibit I:
1991 Montana Non-Coal Freight Rail Composition
(Originating and Terminating Carloads)



The commodities shown in Exhibit I are shipped to and from freight stations across the state. In 1991 there were 40 freight rail stations with 1,000 or more originating and terminating non-coal rail carloads, and a further 29 with between 500 and 999 originating and terminating carloads. The number and respective volumes at each station is indicative of the fact that even with the loss of branch lines over the past decade, the state maintains an extensive network of main lines and branch lines. This network is used primarily for exporting. Montana serves as a bridge for rail freight movements. The majority of carloads originating and terminating in Montana are outbound, in 1991, 78 percent of these carloads originated in the state.

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Over the past ten years, the rail industry in Montana experienced considerable restructuring that resulted in a decrease of about 1,400 miles of track. The restructuring involved the Burlington Northern Railroad reducing the extent of its branch line network. Ownership of certain lines was transferred to short line operators such as Montana Western or Central Montana Rail and a new regional operator, Montana Rail Link. In other cases, lines were abandoned.

Despite the extensive loss of branch lines, the overall volume of rail freight (excluding coal) remained fairly constant between 1982 and 1991 at 166,000 carloads. The products that were formerly shipped on the abandoned lines are now most likely hauled by truck to the nearest freight rail access.

2. Intermodal Freight Rail

Intermodal freight rail in Montana involves the transfer of trailers onto flat cars, containers onto flat cars, the reload of lumber from trucks onto rail cars, and the transfer of grain from trucks to hopper cars. The vast majority of trailer on flat car and container on flat car intermodal transfers take place at the Port of Montana in Butte, the Northern Express Transportation Authority in Shelby, and at Burlington Northern's intermodal terminals in Billings, Shelby, and Missoula. Grain transfer takes place at hundreds of terminals. Both the Port of Montana and Northern Express Transportation Authority have experienced large increases in intermodal traffic during the past three years. Burlington Northern's facilities are also active, with approximately 900 carloads in and out each month at Billings, and 500 in and out at Shelby. In Missoula the numbers are smaller with between 50 and 100 carloads in and out each month.

3. Highway Freight

The proportion of commercial traffic in the vehicle stream varies considerably around the state. The highway system is a key component of the circulation of freight in the state. The heaviest concentration of interstate and intrastate truck movements occurs along Interstate corridors. With the exception of Interstate 90 west of Billings, no corridors in the state have an average daily commercial vehicle traffic over 1,000.

Although there is no origin and destination information available for commercial vehicles, the traffic count information suggests that a large portion of the interstate traffic consists of trucks travelling across the

state. Within Montana, the commercial traffic is most heavily concentrated between the major population centers of Billings, Bozeman, Butte, Great Falls, Whitefish/Kalispell and Missoula.

Manufactured goods. While the vast majority of bulk commodities are shipped out-of-state by rail, highway freight plays a similar dominant role in the shipment of manufactured products out of the state and to and from regional distribution centers. Trucks serve a different market to the railroads. They move the vast majority of manufactured goods because they are able to offer door to door service and do not require large economies of scale. In 1989, 84 percent of all manufactured freight moved to and from Montana was shipped by truck (Montana Motor Carriers Association, 1994). Annually some 13 million tons of manufactured goods are moved out of the state by truck (75 percent of all outbound manufactured goods) and 17 million tons of manufactured goods are shipped into the state by truck (94 percent of total inbound freight tonnage).

Agricultural shipments. The motor carrier industry plays a key role in the agricultural industry for transporting livestock, feed, fertilizer and other goods to farms and ranches. In addition, trucks haul grain and livestock to elevators, processing plants, and markets.

4. Air Freight

The volume of air freight handled by Montana's major commercial airports (Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, and Missoula) has increased considerably in recent years. All air freight shipments are intermodal because they involve surface transportation to and from the airports. In 1993, 16,275 tons of air cargo were shipped, an increase of 18.6 percent since 1990. The vast majority, about 80 percent, of air freight is shipped into Montana with the balance exported.

II. KEY FREIGHT MOBILITY ISSUES

Recent state and national trends have caused significant changes in Montana's freight transportation system.

These trends have resulted in:

- A major decrease in railroad track mileage, but little change in the overall volume shipped into and out of the state.

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- An increase in intermodal freight traffic in the state.
- A steady increase in the number of truck miles each year.

These trends reflect changes in the organization and delivery of transportation services by private providers as they seek the most efficient form of operation. The trends also reflect the steady increase in the number of freight-related trips in Montana and nationally.

Currently, Montana has an effective freight transportation system that provides the mobility required for exporting bulk commodities from the state, the circulation of freight within the state, and the import of time sensitive materials. The key transportation planning issues for freight mobility in Montana arise from concerns about the consequences of past trends and the desire to ensure that Montana has a transportation system that will meet current and future freight mobility needs. On the supply side, this depends upon whether Montana can expect to see a continuation of past industry trends and understand the implications of new directions in the provision of freight services. On the demand side, the key issue concerns the nature of future freight mobility needs.

Freight mobility issues were identified by Montana's citizens through public meetings across the state and focus groups involving transportation providers. The issues arising from the analysis of existing conditions and practices are described below.

A. Issues Raised By Citizens and Industry Representatives

Citizens and industry representatives identified a number of planning issues concerning freight transportation in Montana. The issues are described in detail in the TranPlan 21 - Issue Identification Results report.

The general issues identified are the following:

- Concern about the loss of rail service, especially as it affects local economies.
- Desire for a balanced freight system that includes rail.
- The perceived need to promote alternatives to truck use.
- Expectation that there will be increased north/south freight movement to and from Canada.
- Alarm over perceived predatory Canadian marketing.

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- Recognition that the private sector plays a major role in freight mobility by rail, air, or truck.
- Concern that the Canadian trucking industry and Canadian producers are at an unfair competitive advantage because of weight exemptions between Sweetgrass and Shelby.
- Belief that the lack of direct air transportation service to Canada impacts freight mobility.
- Concern about grain car and container car shortages.

B. Issues Arising From Existing Conditions

The following freight transportation issues arise from the evaluation of recent trends, existing conditions, and practices as part of the TranPlan 21 technical work.

- **Decline in freight rail branch lines**

The Montana State Rail Plan has documented the decline in freight rail branch lines in Montana that occurred throughout the 1980s. Restructuring in the rail industry resulted in rationalization and cost cutting measures that reduced the geographic scope of freight rail in Montana. More specifically, service was eliminated along many rail branch lines that served smaller communities. The abandonment of branch lines peaked during the early 1980s, however, the railroad industry continues to restructure. The rail industry in Montana overall appears healthy - the total volumes shipped have not declined over the past decade. It is difficult to predict the future consequences of continued restructuring for Montana, but it is reasonable to assume that it increases the prospect of a further decline in track mileage and the associated local economic impacts.

Rail industry observers believe that the Burlington Northern Railroad, who provides almost all main line service in Montana, has already realized the majority of the productivity gains that they can achieve on their branch line operations. On the supply side, the most likely opportunities for reducing costs, other than providing subsidies or tax breaks, would be if branch lines were turned over to short line operators. On the demand side, the only opportunities for branch line preservation arise from increasing revenue either through increased demand or rates.

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- **Adverse impacts on pavement preservation from increased truck volumes**

The number of ton miles hauled by heavy vehicles over Montana's highways has increased steadily over the past decade. Between 1980 and 1990 alone it grew by 7.9 percent (Cost Allocation Study, Montana Department of Transportation, 1992). Historically, there has been a steady increase in the volume of truck traffic and especially the number of equivalent single axle loads (ESALs). Equivalent single axle loads provide an indication of the physical demand that the passage of a vehicle places on the roadway. These demands can be calculated for different classes of vehicles to provide a measure that is used for design purposes and also provides a good measure for monitoring the actual use of the roadway.

Montana law and regulations control the size and weight of trucks and are designed to preserve pavement surfaces. Contrary to public perceptions, longer vehicle combinations vehicles actually distribute the gross weight over greater lengths. This results in lower axle weights than on the statutory five axle trucks. Montana's most recent Cost Allocation Study concluded that trucks pay their "fair share" relative to basic vehicles for the construction and maintenance of Montana's highways. This suggests that increased truck traffic generates sufficient additional revenues to meet additional highway demands.

- **High potential for adverse impact on pavement conditions on secondary system and county maintained-roads from increased truck volumes**

The secondary system and county-maintained roads are built to design standards which are based upon the expectation of far lower equivalent single axle loads than on the National Highway, primary, urban, or interstate systems. Therefore, when segments of the secondary system experience significantly higher equivalent single axle loads than they were designed for, there are severe impacts on pavement conditions. There are selected examples of where this has taken place. The examples include grain shipped to elevators in Montana from Canada, and instances of the transfer of loads from the rail system to the road system. In the latter case, branch line preservation may prove a cost effective strategy for secondary system pavement preservation.

- **Effective oversize/overweight enforcement helps ensure efficient freight mobility**

The motor carrier industry has had low profit margins since the deregulation of interstate trucking. Montana's regulation of intrastate trucking was recently preempted by recent federal legislation in all areas except household goods carriers and hazardous and solid waste. This will increase the competitive environment for intrastate trucking. In this competitive environment any firm that is not in compliance with size and weight restrictions is at an unfair competitive advantage. Therefore, it is in the interest of the motor carrier industry and the efficient movement of freight to have an effective oversize/overweight enforcement program. In addition, an effective program plays a vital role in pavement preservation.

- **Conflict between passenger and freight mobility and quality-of-life goals in certain corridors**

There appears to be conflict between passenger and freight traffic on some corridors, most notably between Whitefish, Kalispell, and Missoula. In particular, the hauling of wood products between Whitefish, Kalispell, Polson, and Missoula has raised safety and quality of life concerns. In addition, on routes such as this with little access control, limited passing opportunities, and increased traffic volumes, passenger and freight mobility are in conflict.

- **Concern about international and interstate regulatory issues**

Canadian trucks travelling through Montana have raised public concern regarding highway impacts and unfair competition with Montana's agricultural producers. It is important to note that Canadian vehicles must conform to the exact weight and length requirements in Montana that the Montana Motor Carrier industry and other states' industry are obligated to meet. The only exception is a demonstration project between the Sweetgrass-Coutts border crossing and the Port of Shelby that aims to evaluate the impacts of the lack of uniformity. This system allows heavier Canadian trucks to travel approximately 35 miles into Montana before transferring or reloading to meet standard regulations (Montana State Rail Plan Update, 1993). The Montana Motor Carriers do not believe that this places Canadian truckers at an advantage because it has limited application.

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- **Uncertainty over the extent of new freight demands arising from international trade**

There is a widespread belief throughout Montana that there will be an increase in freight movement through the state due to the North American Trade Agreement. Further, the Canadian Provinces to the north have strong economies and relatively large populations, factors that fuel the expectation of opportunities for increased trade with Canada. However, caution should be exercised in considering infrastructure improvements either to meet anticipated new freight demands or to "try and induce" north to south freight movement. At present, the nature and extent of future increased freight movements are not clear. While there will undoubtedly be increased opportunities for trade with Canada, increased freight movements to, or through, Montana as a result of the North American Trade Agreement will not be a panacea for every community's economic development ills. Historically, truck traffic has grown at a far slower rate than passenger traffic. Therefore, unless high passenger vehicle growth is expected in north-south freight corridors, new demands may be met by existing capacity. This historic trend should be carefully considered as part of any route or corridor analysis.

- **Border crossing capacity constraints provide the greatest potential for adversely impacting freight mobility**

The U.S. Department of Transportation's study the "Assessment of Border Crossings and Transportation Corridors for North American Trade (The "6015 Study") concludes that capacity constraints at border crossings will provide the greatest constraint to international freight mobility. These conclusions apply to Montana's busiest point of entry, Sweetgrass-Coutts, which has not been improved since the 1930s (Governor's Trade Advisory Council, November 1993).

There are a total of 15 crossing points between Montana and Canada, seven are on state or national routes, and only three operate on a 24 hour basis (in Raymond, Roosville, and Sweetgrass-Coutts). Any decrease in the hours of operation could adversely impact connectivity with the Canadian highway system. Similarly, at the busier crossings, increased hours of operation could improve local connectivity.

- **There is a need for increased public and governmental understanding of freight mobility**

Lack of information and understanding raises the danger of poor decision-making concerning freight mobility. Public involvement efforts in Montana revealed widespread sentiment for a modal shift of freight to rail. The Governor's Trade Advisory Council has received testimony on the importance of improving highway facilities to meet expected new freight demands arising from international trade and ensuring Montana's economy benefits from increased trade. There is strong feeling that the hauling of grain into Montana is adversely impacting pavement conditions and rail car availability. Concern about future congestion in the urban areas has not considered impacts on the local circulation of freight on the highways but focussed on passenger transportation. In all these areas, there is a weak information base from which policy-makers and the public form opinions about freight transportation needs and issues. Information concerning the impacts on performance (overall freight mobility) of different government actions is the weakest. The development of the Intermodal Management System affords the opportunity for increasing the understanding of freight mobility needs.

- **Air transportation plays a vital role in freight related mobility**

The volume of freight shipped by air in Montana is small, but air cargo is of high value. In addition, air transportation allows face-to-face contact, which is essential for commerce and hence freight mobility. The lack of direct commercial scheduled service to Canadian cities such as Calgary and Lethbridge is considered a barrier to freight mobility. However, under the "open skies" agreement between the United States and Canada, air carriers no longer require bi-national agreements for introducing north-south service.

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III. POLICY GOALS AND ACTIONS

This section describes the policy goals and actions adopted for addressing freight mobility issues confronting Montana.

A. POLICY GOAL A - Ensure Efficient Highway Freight Mobility

Action A.1. Monitor highway freight corridors and prioritize improvements in these corridors.

This action includes designating primary freight corridors so that investment and promotion will be targeted to ensure mobility in these corridors. These corridors will be designated by TranPlan 21 and monitored through the Intermodal Management System. Based on current traffic counts, the corridors will include all current highway routes with over 500 commercial vehicles per day. The current and forecast performance of these corridors will be monitored. Where traffic congestion is forecast to impact freight mobility, actions that reduce congestion or provide alternative modes such as rail will be considered.

Level of Effort:

Initial Year 1: 160 staff hours. The Intermodal Management System implementation and the statewide intermodal plan has identified current and future highway freight corridors. The Intermodal Management System implementation will identify performance measures for freight mobility in these corridors.

Annually: 160 hours staff effort to monitor performance in highway freight corridors and identify priority improvements. It is anticipated that this action will be incorporated into ongoing Intermodal Management System maintenance.

Timing: Initiate as part of TranPlan 21 adoption

Action A.2. Identify and address impediments to efficient freight movements in highway freight corridors.

As part of Intermodal Management System's implementation, the MDT will monitor impediments to overall freight mobility in these corridors. The focus will be on the entire trip from origin to destination within the state. Impediments will include regulatory and procedural as well as those relating to the physical infrastructure. This action involves collecting the data required to measure

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impediments to freight mobility. The level of effort necessary to implement this action will depend upon the performance measure selected. These may range from simply asking motor carriers and freight forwarders to identify impediments to efficient freight movements, to conducting an origin-to-destination survey of trucks in the highway freight corridors.

Level of Effort:

Initial Year 1: 160 staff hours to 800 staff hours, measure freight corridor performance as part of Intermodal Management System implementation.

Annually: 160 staff hours of on-going effort to collect data from which to monitor system performance. This will be undertaken as part of duties associated with maintaining the Intermodal Management System.

Timing: Initiate in 1995.

Action A.3. Ensure freight corridors are addressed in metropolitan planning organization and other jurisdictional transportation plans.

Montana's highway and rail transportation system passes through many different jurisdictions. While the MDT plans for development within its right of way, abutting land is subject to local, tribal, and federal planning that has direct impacts upon the transportation system. The MDT will seek to ensure that efficiency is maximized and maintained along freight corridors by coordinating its planning and programming with other units of government.

In particular, in urban areas and metropolitan planning organization plans, freight mobility needs should be considered. These plans should address the highway freight corridors and access to the freight transfer facilities identified by TranPlan 21 and the needs of the "connectors" between these facilities and the statewide corridors identified.

This action will ensure that freight mobility is addressed at the local and regional levels. Consistency between metropolitan planning organization and MDT plans will be critical because local actions determine, to a large degree, the success of plan implementation. In areas where there is no metropolitan planning organization or other local/regional plan, the MDT will work with local jurisdictions to determine the best strategies and actions available.

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Level of Effort:

Initial Year 1: 480 staff hours to work with local jurisdictions and ensure TranPlan 21 results are incorporated into metropolitan planning organization and urban area plans

Annually: Incorporate into ongoing urban planning work

Timing: Initiate in 1995

Action A.4. Work with local, federal and Canadian governments to ensure Montana's border crossing needs are met.

Montana has three 24-hour points of entry, two seasonal points of entry, and ten other points of entry that are not open 24-hours. The Sweetgrass crossing is the most important one for the state. It is due south of Calgary and Edmonton which are major growing centers of population and industry in Canada. The crossing has experienced substantial increases in traffic, some 38 percent between 1988 and 1993 and accounts for 60 to 70 percent of exports to Canada in the Rocky Mountain Region. (United States Department of Transportation, 1993).

This action involves Montana working with federal, local, and Canadian provincial governments to ensure than border crossing needs are met. United States Customs, which has jurisdictional authority for border crossings, is developing new programs and priorities for border crossings. These include programs for increasing the level of automation to include electronic filing of paper work for trucks. However, funding decisions for border improvements are made by the General Services Administration. All capital improvements over \$1.5 million must be authorized by Congress.

A key goal for Montana is to ensure that future plans do not adversely affect the number of border crossings and their hours of operation. U.S. Customs is increasingly customer-oriented, therefore this action involves coordinating with customs to ensure adequate capacity and staffing levels.

Level of Effort:

Initial Year 1: 80 hours to identify U.S. Customs issues and meet with Customs and discuss any future plans affecting Montana

Annually: 100 staff hours for coordination with other jurisdictions

Timing: Initiate in 1995

POLICY PAPER**B. POLICY GOAL B - Ensure a Balanced Freight System Through Preservation of the Existing Rail and Air Transportation System**

Action B.1. Prevent the further loss of rail branch lines by working with the railroad industry to facilitate the preservation of branch lines.

The state has already experienced a significant amount of branch line abandonment. While the pace of abandonment has slowed, there is no guarantee that other branch lines in Montana will not be threatened in the future. In addition, the railroad industry continues to reorganize and restructure, as illustrated by the proposed merger between Burlington Northern Railroad and the Atchison Topeka and Santa Fe Railroad.

When branch lines are abandoned, they are usually in poor condition because of deferred maintenance. This is because there is no reason to continue to invest in the facility if it will be closed in the near term. This action involves the state, through the MDT acting as a facilitator responsible for bringing together the main line and the short line operators, to identify lines that might be abandoned by the main line operator. The goal is to facilitate the transfer of the branch lines to operators with lower cost structures, before there is a backlog of deferred maintenance. This action will help to retain branch lines that could be operated by short line and regional operators at no cost to the public.

The success of this action depends upon participation by the railroad providers and could only result in the preservation of branch lines with sufficient traffic to generate revenues that will cover the lower cost structure of short line operators.

Level of Effort:

Initial Year 1: 320 staff hours. Additional hours if branch lines are being transferred

Annually: 320 staff hours

Timing: Initiate in 1996

Action B.2. Identify and address priority grade separation needs at busy railroad crossings.

Montana has numerous grade crossings throughout the state. This action identifies priority grade separation needs. Conflicts between vehicular and rail traffic will be reduced to promote safety and reduce delays. Determining priorities for reducing conflicts between the two transportation modes will be based upon safety

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and performance improvements. Grade separation improvements will be unrealistic goals for many communities because of the high costs that arise from the realignment of existing traffic. In these cases, urban area plans should identify other strategies for reducing conflict. Grade separation for safety purposes can be funded through the safety program in ISTEA.

Level of Effort:

Initial Year 1: Depends upon projects funded

Annually: Depends upon projects funded

Timing: Initiate in 1995

Action B.3. Retain existing rights of way in rail corridors.

Past rail branch line abandonments often resulted in loss of rights-of-way. To counteract this trend, the MDT will actively pursue the retention of railroad rights-of-way. This will prove beneficial to the MDT because rail lines often parallel roads and highways that might need expansion in the future. Similarly, it is important to maintain transportation options that might demand reactivation of the rail branch lines at some future time. There is also interest in the reuse of railroad rights of way for bicycle and recreational uses.

Level of Effort:

Initial Year 1: Depends upon right of way acquisition costs

Annually: Would require legislative action to develop funding source

Timing: Initiate in 1995

Action B.4. Work with airport operators to maintain, preserve and improve levels of commercial air freight service.

The provision of air freight service is largely a product of private market forces. The cities receiving Essential Air Service passenger subsidies have subsidized freight service, however the federal government doesn't recognize the freight service benefits of EAS. This action involves the MDT seeking to minimize any future air freight service reductions. By soliciting input from airport operators and air freight carriers, the MDT will improve its understanding of the industry's needs, especially where it relates to surface transportation access. This information will be collected on an annual basis as part of the intermodal management system and addressed in future statewide air transportation plan updates.

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Level of Effort:

Initial Year 1: 120 staff hours to collect information and document

Annually: 80 staff hours

Timing: Initiate in 1995

C. POLICY GOAL C - Improve Intermodal Connectivity by Increasing the use of Intermodal Freight Facilities

Montana has well established facilities for the intermodal transfer of trailers and containers onto flatcars. These include the Port of Montana and the Northern Express Transportation Authority facilities as well as those operated by Burlington Northern. Industry representatives believe that there is adequate trailer on flat car and container on flat car intermodal capacity in Montana for the 1990s. There is concern that the provision of additional capacity would result in an over supply that would be to the detriment of intermodal facility operators. Therefore, policy actions do not identify state roles in the provision of additional trailer on flat car and container on flat car facilities. However, the Intermodal Management System will be used to monitor capacity. There is considerable interest in the intermodal transfer of wood products and grain from truck to rail at points much closer to their production. Actions for encouraging the use of intermodal facilities are discussed below.

Action C.1. Encourage the use of, and improve the performance of, existing intermodal terminals with open access to enable efficient transfers between modes.

This action involves encouraging the use of and improving the performance of existing intermodal facilities. Trailer on flat car and container on flat car terminals are included as facilities of statewide importance in the transportation plan. The routes connecting these facilities to the highway corridors are also included.

In pursuing intermodalism, the Intermodal Management System will identify any deficiencies in these connectors, their impact on freight transportation, and help to identify any project needs. In implementing the action the MDT will ensure that any intermodal hubs receiving public support allow open access.

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Level of Effort:

Initial Year 1: 480 staff hours to determine need for improvements to intermodal connectors

Annually: To be determined, would include project costs

Timing: Initiate in 1995

Action C.2. Encourage the use of existing truck/rail reload facilities and work with private industry in the development of new facilities with open access.

This action encourages the use of existing truck to rail reload facilities and the development of new facilities. The objective of this action is to encourage the transfer of grain, lumber products and other bulk commodities from truck to rail as early as possible. If successful, this will increase the utilization of branch lines and reduce the impacts of truck traffic on pavement conditions.

Level of Effort:

Initial Year 1: 480 staff hours

Annually: 320 staff hours

Timing: To 1995

Action C.3. Involve shippers and private sector providers on a periodic basis to improve the MDT's understanding of freight needs.

Freight transportation is provided and used by private industry. To better understand existing and emerging freight trends and needs, this action obtains input directly from freight transportation providers, operators, and customers. This will provide a feasible means of understanding the freight industry's needs and provide input for project prioritization.

Level of Effort:

Initial Year 1: 120 hours

Annually: 120 hours. This could be incorporated into the ongoing Intermodal Management System work

Timing: Initiate in 1995

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Action C.4. Include freight access as a component of statewide airport system planning.

Intermodalism extends beyond rail and truck freight. High value air freight requires intermodal considerations. This action addresses surface transportation access to airports as part of Montana's statewide airport system planning.

Level of Effort:

Initial Year 1: To be determined

Annually: To be determined

Timing: Incorporate as part of future updates to the Montana State Aviation System Plan

Action C.5. Ensure that the MDT has in-house modal expertise to address freight issues associated with Interstate Commerce Commission requirements.

This action ensures that the MDT has the modal expertise to address shippers' issues concerning interstate and international transport. Interstate Commerce Commission regulations and policies are complex and Montana's producers frequently have issues that need addressing with in-house expertise. The MDT will be able to ensure rapid response to outside requests for assistance. Recent examples of the need for additional expertise have been in assessing the following areas: the rail car supply situation, the sale of Canadian grain in Montana, rate equities, abandonment impacts and the Burlington Northern merger.

Level of Effort:

Initial Year 1: Between one-half and one full time employee

Annually: Between one-half and one full time employee

Timing: To be determined

POLICY PAPER**IV. POLICY GOALS AND ACTIONS NOT ADOPTED**

The following lists the policy goals and actions that were not adopted by the TranPlan 21 Steering Committee and the reason.

Action. Ensure minimum level of service "C" or better in highway freight corridors.

Reason: *It is not appropriate to establish level of service goals solely for highway freight corridors.*

This action ensures ensuring that there is an adequate level of service on highway freight corridors. Maintaining a minimum level of service C will reduce delays to freight from congestion. The action addresses current deficiencies and takes actions in anticipation of future level of service degradation in highway freight corridors. This action will require the implementation of transportation system management and improvements necessary to ensure level of service C or better. The action is multimodal, for example, where there is forecast corridor level rural congestion, use of rail will be promoted. The action will result in directing freight related improvements to the corridors currently used most heavily. This reflects current demands and forecasts based upon future population and employment growth. The action establishes level of service goals for freight in the urban areas. If heavy trucks are making large contributions to level of service degradation, as will be the case in rural areas, then the viability of rail will be assessed.

Level of Effort:

Initial Year 1: To be determined

Annually: Involves identifying backlog of current needs and calculating future costs

Timing: After corridors are identified by the plan

Action. Take no action to preserve branchlines

Reason: *It is in the state's interest to have a balanced multimodal freight system.*

This action requires no state action with respect to branch line abandonment. The action reflects the position that private sector decision-making will result in the transportation system that provides the most efficient freight mobility options for Montana and that government should therefore take no action.

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Action. Provide financial support for the maintenance of threatened branch lines based upon strict criteria.

Reason: *The state should not be involved in financing rail. There would be great danger of investing public money where there is no market demand for rail.*

This action involves the state establishing criteria for funding threatened branch lines. These criteria will include an analysis to determine the public benefits and costs of the support and contrast these to the costs of closure. This will include an assessment of the impacts of branch line closures on pavement conditions, safety, economic development and other variables. A more restrictive program under this action would limit financial support for infrastructure improvements that would increase the performance of the line and hence its use and in this way contribute to long term viability. Branch line improvements are expensive. Costs can range between \$200,000 and \$750,000 per mile.

Although the funding mechanism needs to be determined, there are two approaches that could be taken: the state directly funding the infrastructure improvement or second, establishing a state guaranteed revolving loan fund for branch line operators to finance any large maintenance needs. Under the Federal Local Rail Freight Assistance program, the state currently has a revolving loan program, however, there has been little participation to date by the branch line operators.

Level of Effort:

Initial Year 1: 320 to identify operators who want to participate

Annually: 480 staff hours, plus improvement costs

Timing: Initiate in 1996

Action. Purchase the rights of way, maintain the track, and lease the use of branch lines threatened with closure to a private operator.

Reason: *The state should not be involved in financing rail. There would be great danger of investing public money where there is no market demand for rail.*

This action involves a high level of state intervention, although it does not mean that the State of Montana will own and operate the branch line. Rather it means that Montana will take over the ownership of the right of way, be responsible for any improvements, and be responsible for maintaining the infrastructure. Railroad companies will then pay to use the facility. There is state law in place that authorizes this type of action. The law was used when the Central Montana Railroad and the Rarus Railroad were established.

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The cost of implementing this action will vary from branch line to branch line and will depend upon the current conditions of the track, maintenance needs, and user demand. The ultimate cost to the public sector will be the difference between maintenance costs and the user fees. Prior to taking this step, a feasibility study will be required on a case by case basis. In evaluating the feasibility of multimodal projects, the benefits of keeping truck traffic off the roads will be considered, in terms of pavement preservation and safety.

Level of Effort:

Initial Year 1: Minimal

Annually: Involves funding any feasibility studies, cost of purchase to be developed

Timing: Initiate in 1996

Action. Improve the performance of Montana's freight rail system.

Reason: The state should not be involved in financing rail. There would be great danger of investing public money where there is no market demand for rail.

The condition of track, speed restrictions, the absence of grade separations, and other factors all affect the performance of the freight rail system in Montana. This action involves the state working with the railroad industry to improve the performance of the freight rail system in Montana. The purpose will be to ensure that rail traffic does not shift to truck and in this way help maintain a balanced multimodal system. The assumption is that if rail performance is improved then the competitive position of rail with respect to trucking will be enhanced.

Action. Fund improvements that will make significant increases in freight rail performance in key freight corridors.

Reason: The state should not be involved in financing rail. There would be great danger of investing public money where there is no market demand for rail.

The Intermodal Management System will provide a mechanism for systematically monitoring the performance of the Montana freight system. The action will provide a mechanism for state action to fund improvements that enhance the performance of the rail system. The improvements will be identified as those that have the biggest impact on the overall efficiency of freight movement and in achieving Montana's multimodal objectives.

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There are a number of examples that illustrate the types of improvements that enhance system performance. For example, the Union Pacific line south from Butte (Silver-Bow) to Pocatello currently has no signalization. However, there are no mechanisms currently available for funding these types of improvements. The Local Rail Freight Assistance loan program can only be used to make low interest loans available for improvements on light density branch lines.

Level of Effort:

Initial Year 1: 640 staff hours

Annually: 480 staff hours

Timing: Initiate in 1996

Action. Determine the feasibility of state provision of rail cars.

Reason: State provision of railcars will not solve the problem. The railroads would substitute state cars for theirs and there would be no net increase.

Rail car shortages are a recurring problem in Montana that most severely affects the agricultural industry. This action will involve determining the feasibility of state ownership of rail cars. Once purchased, the rail cars will be released into the system and the income from their use used to pay back the cost of purchase.

Level of Effort:

Initial Year 1: 160 staff hours to evaluate feasibility, 480 staff hours to develop program, establish funding source (possibly a loan), and purchase railcars (if feasible)

Annually: 80 staff hours to monitor success

Timing: Initiate feasibility study in 1995

V. REFERENCES

Assessment of Border Crossings and Transportation Corridors for North American Trade. United States Department of Transportation, 1993. (6015 Study)

Governor's Trade Advisory Council: Summary of Proceedings. Great Falls, Montana. 11/16/1993.

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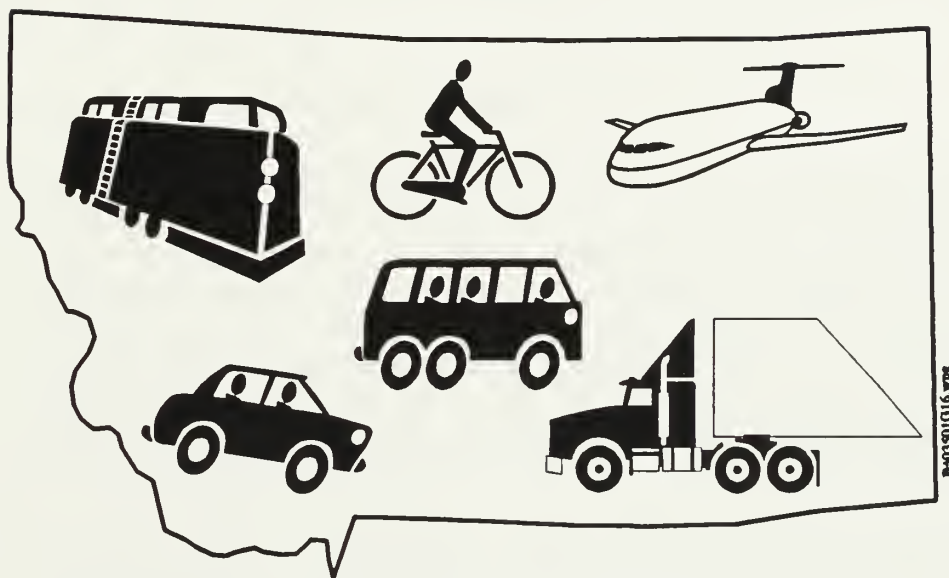
Report for the 1994 Economic Outlook Seminar. The University of Montana, Bureau of Business and Economic Research.

1993 Montana State Rail Plan Update. Montana Department of Transportation, Rail and Transit Division.

Cost Allocation Study for the Montana State Highway System. Montana Department of Transportation, July 1992.

Montana Department of Transportation

TranPlan 21



Roadway System Performance

Policy Paper

prepared by

DYE MANAGEMENT GROUP, INC.

in conjunction with

WOOLPERT

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I. BACKGROUND - ROADWAY SYSTEM PERFORMANCE (PRESERVATION) IN MONTANA

This policy paper describes the current performance of Montana's highway system and the trends affecting the future performance of the system. Key issues concerning the current and future performance of the highway system are described and strategies for addressing them are outlined.

A. The Extent of Montana's Highway System

Montana is one of the most rural states in the nation, covering a large sparsely populated land area. The highway system plays a central role in allowing the state to function politically, economically, and socially. Three-quarters of all miles travelled in Montana are driven outside of the state's urban areas. Montana's highway system connects small communities to regional service centers and the major cities to one another and the rest of the nation. As Governor Racicot stated, "highways are the life-line and life-blood of [Montana's] economy". In addition, Montana's highway system plays a key role in the National Highway System providing important interstate and international transportation corridors.

The extent of Montana's highway system is summarized in Exhibit 1, on the following page. There are 12,807 center-line miles and 28,422 lane miles, on the state's highway system.

The transportation system represents the largest single capital investment in the state of Montana. The challenge for Montana is to identify the most effective strategies for preserving and maintaining this system. Using existing resources most cost effectively is a key objective for the MDT because the amount of funding per mile of roadway in Montana will always be relatively low, compared to other states.

Although Montana recently increased the fuel tax to 27 cents per gallon, it is important to remember that Montana still ranks 45th in the nation in revenue-dollars per mile of road. This is because Montana's population ranks 44th in the nation when measured per mile of road. The limited population to support the highway infrastructure restricts the potential for generating new funds. For example, each new penny of fuel tax in Montana generates only \$5.3 million in total revenues. These revenues are matched by federal funds on most projects. A particular challenge for Montana is funding maintenance that is ineligible for federal funds.

Exhibit 1
Montana's Highway System Miles
by State Funding Categories

System Classification	Center Line Miles	Total Lane Miles
National Highway System	3,859	10,344
Primary Highway System	2,836	5,793
Secondary Highway System	4,631	9,244
Urban Highway System	345	769
State Highways (Orphan Plant)	1,136	2,272
Total on State Systems	12,807	28,422
<i>Off System Urban</i>	1,826	
<i>Off System County</i>	56,099	

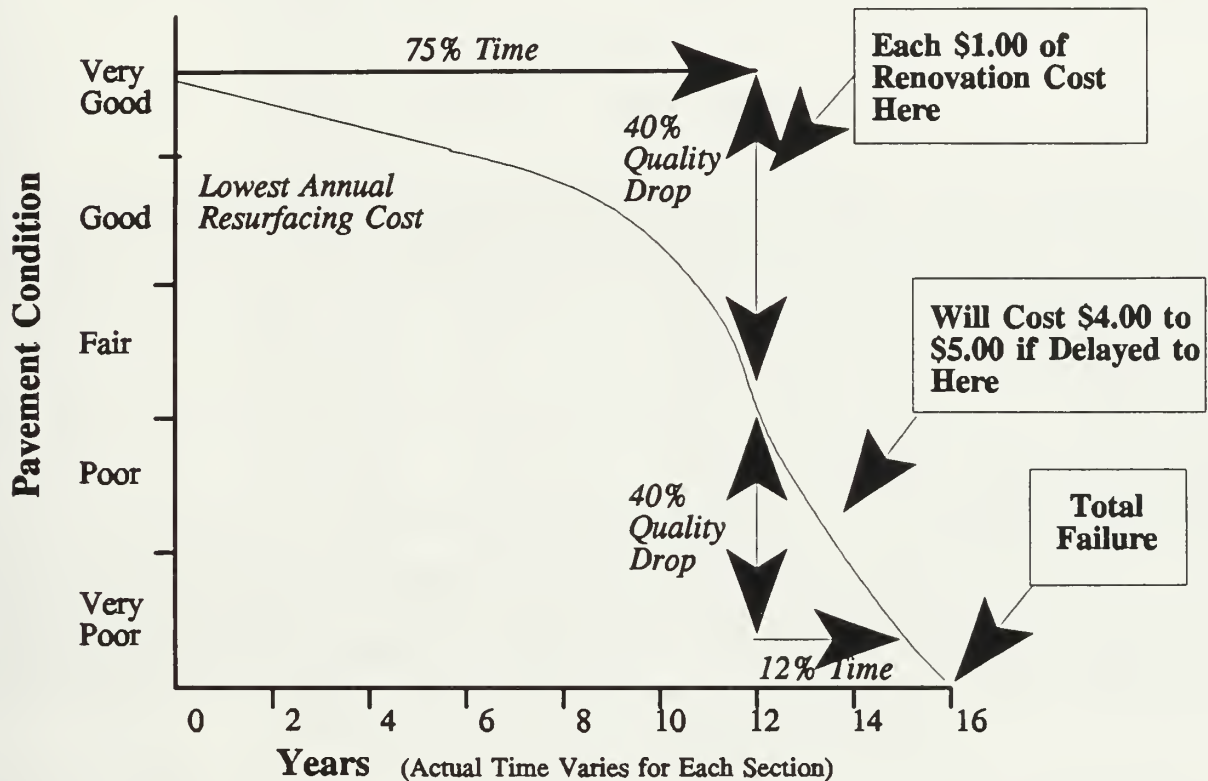
Although a low population generally translates to low traffic volumes, deterioration of the highway infrastructure is not proportionately reduced. One of the factors influencing pavement deterioration is certainly heavy truck traffic, but time and weather, such as Montana's severe freeze-thaw conditions, also play a major role. These factors are also the primary causes for deterioration of bridges, culverts, signs, guardrail, etc. Montana's highway users pay for preserving and maintaining this extensive system. It is important to note that normal system maintenance costs are not eligible for federal cost sharing.

The importance of investing in system preservation is increased by the fact that delayed preservation escalates in cost exponentially. This is demonstrated by Exhibit 2 which shows that deferred pavement preservation results in large increases in cost.

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Exhibit 2

Cost of Delaying Preservation



Source: "The Hole Story", APWA, 1983

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B. Current Roadway Conditions

With a few notable exceptions, there is adequate capacity to meet current travel demands. Maintaining and preserving the current performance level of the system is an important planning and management challenge for the state.

Montana has seen pavement condition improvements over the past ten years, however there are many miles with poor structural conditions and a short remaining life. The development of the MDT's pavement management system will provide much needed information about the extent of pavement preservation needs.

1. Pavement Conditions

As reported in the *1992 State of the Primary Pavement Report*, the average condition of the primary and interstate pavements appears to be good. Pavement conditions are summarized in Exhibit 3 below.

Exhibit 3
Average Serviceability of Statewide System

	Average Pavement Serviceability Index				
	1983/84	1985/86	1988	1990	1992
Primary System	2.6	2.8	3.0	3.0	3.3
Interstate System	3.6	3.7	3.7	3.7	3.6

This measure describes the serviceability of the pavement but does not provide information about the remaining life. A recent surface treatment that does not structurally strengthen the road could mask base weakness. Therefore, it is important to be very careful when using Pavement Serviceability Indices.

Pavement conditions are measured by a Present Serviceability Index that ranges from range 0 to 5. A measure between 2 and 3 is "fair", and between 3 and 4 is "good". The above data indicates that the average pavement serviceability index for the primary system pavements increased from the mid-"fair" range in 1983 to the mid-"good" range in 1992. Another notable sign is that the inventory of lane miles with a very poor or poor condition has been reduced on both systems to almost zero. (However, pavements are constantly deteriorating and many miles may be in danger of falling into these conditions.) The 1983-1992 improvements can be partially attributed to increases in the motor fuel tax. The tax increases allowed Montana to support a state-funded construction program that paid for cost-effective pavement preservation projects not eligible to receive federal funds. Another reason for the improvement is that the state concentrated on improved preservation efforts over this time period. For comparative purposes, the national average condition for pavements on the arterial systems is somewhat below the "good" range.

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Over the past ten years the average condition of interstate pavements remained essentially constant in the middle of the "good" range. Again, this partly reflects the level of investment the state made between 1983 and 1992, the state's efforts in preservation, and also the fact that federal funding for the interstate system remained approximately constant throughout the period. This condition of Montana's interstates is slightly better than the national average for the interstate system.

Data regarding the average condition of secondary system pavements is not available for this time period. These data will become available with the implementation of the MDT's pavement management system together with information about the remaining life of the pavement. There are 4,631 center line miles on the secondary system, of which the MDT is responsible for maintaining less than 500 miles. Classification on the secondary system merely makes the roadway eligible for improvements as determined by the counties responsible for the federal funds suballocated for their use. Secondary system pavement preservation needs are in part addressed by the MDT's Save Our Secondaries program. There is continued county concern that there is not adequate funding to meet preservation needs on the secondary system. This could be true, with acute problems in certain counties experiencing heavy road use, particularly by trucks. However, this conclusion can not be validated until the data are available. It should be emphasized that one consequence of deferred maintenance on the part of counties will be increased preservation needs eligible for federal funding.

The Pavement Management System, which is being implemented in coordination with the state's metropolitan planning organizations and counties, will provide improved information about pavement needs on the urban system.

2. Bridge Conditions

Bridge conditions appear to be better than the national average, with only 9.3 percent structurally deficient compared to the national average of 22 percent. Exhibit 4, shows the number of and condition of Montana's bridges. About 20.4 percent are functionally obsolete, which is slightly above the national average of 15 percent. This is based upon federal standards, which might be considered excessive for some of the state's low volume roads. Most bridges in the western part of the state are in need of retrofitting to bring them into compliance with code provisions for earthquake loading resistance. The Bridge Bureau has been developing methods for retrofitting and is programming the retrofit based upon a

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prioritized list of bridges. The Bridge Management System will help to identify the real functional needs of bridges by providing more complete data.

Exhibit 4 Number and Condition of Montana's Bridges

Highway System	Number of Bridges	Structurally Deficient Bridges		Functionally Obsolete Bridges	
		Number	Percent	Number	Percent
Interstate	816	2	0.25	208	25.5
Non-Interstate, NHS	499*	24	4.81	35	7.0
State Primary	497	16	3.22	41	8.3
State Secondary	481	34	7.07	52	10.8
State Urban	60	5	8.33	26	43.3
Local On-System**	246	22	8.94	23	9.4
Local Off-System	1,855	313	16.87	524	28.3
Total	4,454***	416	9.34	909	20.4

Note: NHS = National Highway System

* NHS, formerly Primary 492

** State highway (orphan plant)

*** Does not include structures under Federal jurisdiction such as BIA, USFS, USPS, BLM

3. Performance of the System

Annual average daily traffic, level of service measures, and motor vehicle accident measures describe the use and general performance of Montana's highway system.

In general, Montana's highway system currently has adequate capacity. A summary measure of capacity are volume to service flow ratios. These indicate the level of highway use compared to the capacity of the roadway. Exhibit 5 shows that the Interstate system and the rural system have very low volume-service flow ratios, which indicate the absence of corridor-level capacity problems. Montana's urban arterials have the

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highest volume-service flow ratios, however, only a small proportion of these roads are at or above 80 percent of their capacity.

Exhibit 5
Volume-Service Flow Ratios
on Montana's Highways

Highway	Mileage by Volume - Surface Flow Ratio						
	< 0.21	0.21 - 0.40	0.41 - 0.70	0.71 - 0.79	0.80 - 0.95	> 0.95	Total
Urban							
Interstate	24	26					50
Other Principal Arterials	25	74	43	4	7	11	164
Minor Arterials	100	40	48	9	7	9	213
Rural							
Interstate	849	292					1,141
Other Principal Arterials	1,666	392	47				2,105
Minor Arterials	3,040	223	50				3,313

Source: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, 1992 (FMWA-PL-93-023), 1993.

C. Future Conditions

As indicated above, Montana has a highway system that is in good condition and meets today's demands from its users. However, the challenge for Montana is in ensuring that the system can meet the demands of the twenty-first century.

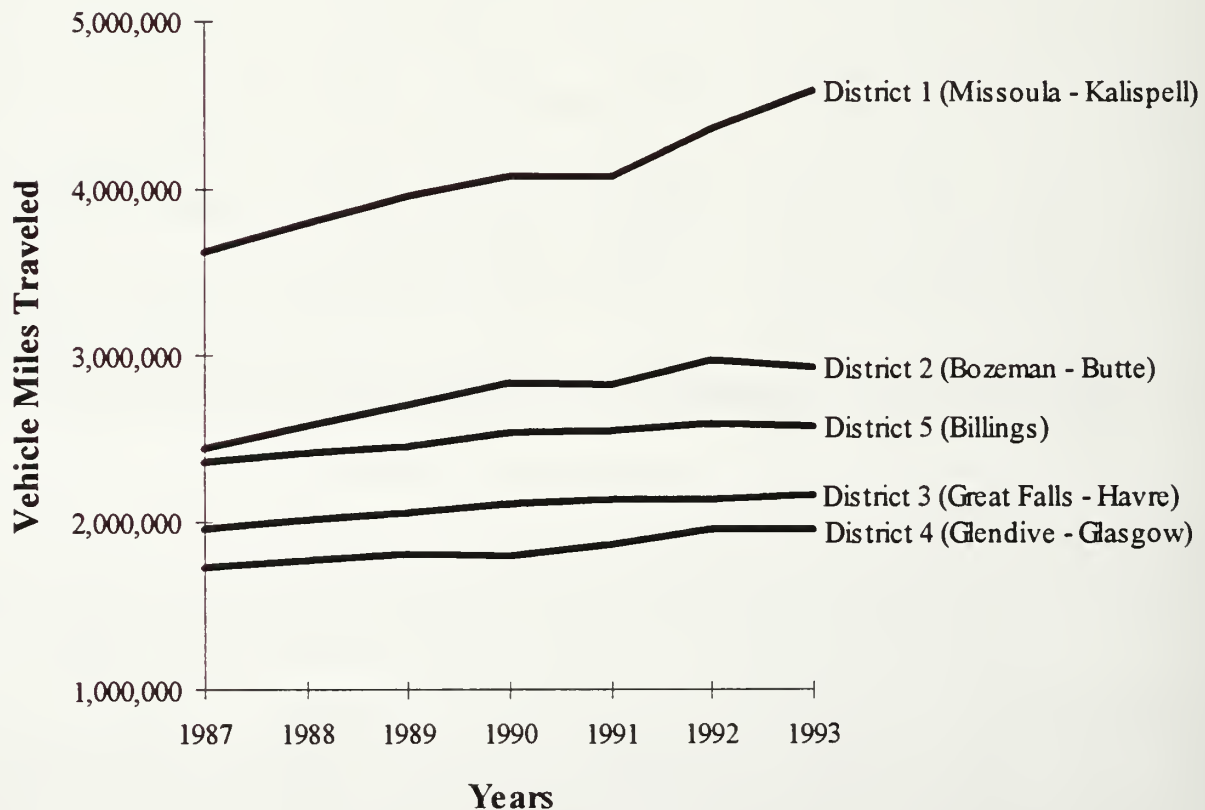
Sustaining existing performance levels to meet tomorrow's demands will be a challenge. Montana's population, economy and associated travel demands are changing. There has been a large growth in vehicle miles travelled in Montana over the past decade. This growth has varied considerably between the different regions of the state. These growth rates are particularly pronounced in the faster growing areas of the state. The growth rates are due to the overall increase in population and employment in the state, increased visits to the state for tourism,

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a growth in bridge traffic through the state, and an overall growth in the number of miles driven by each Montanan. Historic rates of growth are shown in Exhibits 6 and 7. Daily vehicle miles traveled in the Missoula-Kalispell area (District 1) have grown at almost three times the rate in eastern Montana.

Forecasts have been developed for traffic demand over the next twenty years as part of TranPlan 21 technical work. These forecasts indicate a slower but continued, rate of traffic growth on Montana's highways. The forecast indicates that over the next twenty years western Montana's roads could be carrying between half and three-quarters as much traffic again. This growth will likely be most concentrated in the counties adjacent to urban areas.

Exhibit 6
Growth in Daily Vehicle Miles Traveled in Montana
1987 - 1993



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Exhibit 7
Vehicle Miles Traveled In Montana by District
1987 - 1993
(Millions)

District	1987	1988	1989	1990	1991	1992	1993	Average Annual Growth Rate (Percent)
District 1 (Missoula - Kalispell)	3.621	N/A	3.96	4.08	4.07	4.37	4.60	3.9
District 2 (Bozeman - Butte)	2.44	N/A	2.69	2.82	2.81	2.96	2.93	2.9
District 3 (Great Falls - Havre)	1.96	N/A	2.06	2.11	2.14	2.14	2.17	1.5
District 4 (Glendive - Glasgow)	1.74	N/A	1.81	1.81	1.87	1.97	1.97	1.9
District 5 (Billings)	2.35	N/A	2.46	2.54	2.55	2.59	2.58	1.4
TOTAL	12.11	N/A	12.99	13.35	13.44	14.02	14.24	2.5

Source: MDT Highway Information System

Note: N/A = information not available

II. KEY ROADWAY PERFORMANCE ISSUES

A. Issues Raised By Citizens and Industry Representatives

Citizens and industry representatives identified a number of issues concerning the current and future performance of Montana's highway system. The issues are described in detail in the TranPlan 21 - Issue Identification Results report.

The overall public sentiment is that Montana has an excellent highway system given the state's size, population density, and resources. Public sentiment is that the highway system is basically complete and that the MDT should focus its efforts on preservation and maintenance.

The general issues identified were as follows:

- **Recognition that improvements will be needed in response to growth.** There is recognition that traffic growth is creating the need for improvements in certain corridors and at some intersections. Most frequently noted was Highway 93 between Kalispell and Missoula. However there is no consensus about the extent to which Montanans wish to choose between adding capacity and managing with a lower level of service.
- **Concern about improvements on low volume roads.** Concern was expressed about the inability to fund improvements on low volume roads, especially those that are gravel.
- **Need for access management.** There is a recognition of the benefits to system performance of better access management and control in major corridors. However, participants cautioned against a statewide approach that does not take regional differences into consideration. (This issue area and related land use planning issues are addressed in the Access Management and Land Use Planning Policy Paper).
- **Prevention of billboard proliferation.** There was a substantial amount of concern about billboard proliferation, especially along scenic corridors.
- **Desire for the highway system to meet the needs of tourism and other growth industries.** The important role that highways play in Montana's growing tourist industry, and in interstate and international commerce was acknowledged. There is a belief that it is the MDT's responsibility to address this through planning and project development. (This issue area is addressed in the Supporting Economic Development through the Transportation System Policy Paper and the Freight Mobility Policy Paper).
- **Need for a consistent approach to improvements.** Citizens and industry representatives believe that the decision process concerning the nature and funding for improvements is not consistent.

- **Expressed concern for the impact on pavement conditions parallel to abandoned rail lines.** There is acute concern about the impacts on pavement conditions on the secondary system and some county roads from rail branch line abandonment. (This issue is addressed in the Freight Mobility Policy Paper).

B. Issues Arising from Existing Pavement Conditions and Preservation Practices

The following pavement preservation issues arise from the evaluation of recent trends, existing conditions, and practices as part of the TranPlan 21 technical work.

1. Current Pavement Preservation Strategies

The MDT is currently developing a pavement management system that will enable a thorough analysis of pavement preservation strategies.

Current strategies are summarized by Montana highway systems 1990 Needs Study. Minimum needs strategies indicate up to a 10 year cycle for seal and cover and a 20 year cycle for overlay. The full needs strategies indicate up to a 7 year cycle for seal and cover and a 14 year cycle for overlay.

The improved average pavement condition on the primary system and the decreased inventory of fair and poor condition pavements also indicate a heavy emphasis on reconstruction over the past 10 years. This was entirely appropriate given the condition of the pavements at the beginning of that period.

The data in Exhibit 8 shows the length of time it will take to work on the entire system based upon actual levels of expenditures over the past five years.

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EXHIBIT 8
Five Year Average - Interval in Years to Work on Entire System
1990 - 1994

					State System (Orphan Plant) 1136
Any Type Of	Interstate 1191 Total Miles	Primary System 5504 Total Miles	Secondary System 4631 Total Miles	Urban 345 total Miles	Total Miles
Pavement Construction/ Reconstruction	8.5	28.5	Data Not Available	Data Not Available	250
Pavement Maintenance	5.6	6.45	Data Not Available	Data Not Available	10
Other Activities	N/A	N/A	N/A	N/A	N/A
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>Maintenance activities are defined as:</p> <ul style="list-style-type: none"> • Thin lift overlay ($\leq .15$) • Recycle/relay asphalt and PCCP • PCCP surfacing • Seal and cover/O.G.F.C. <p>Construction activities are defined as:</p> <ul style="list-style-type: none"> • New construction • Reconstruction • Widening and overlay • Overlay (more than a thin lift) </div> <div style="width: 48%;"> <p>Other activities are defined as:</p> <ul style="list-style-type: none"> • Gravel surfacing • Structures • Safety improvements • Railroad crossings • Intersection improvements • Roadside maintenance • Drainage • Signs and striping maintenance • Plowing and deicing • Other miscellaneous </div> </div>					

Source: Derived from MDT actual expenditure data.

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According to the data, the average interval to undertake some level of pavement maintenance on the Interstate and primary system is 5.6 and 6.4 years. In general, the pavement preservation on the interstate system is happening on a cycle that will continue to ensure good pavement conditions. However, based on the past 5 years of projects, the average length of cycles for some type of pavement construction/reconstruction work on the primary system has been 28.5 years. It is not easily possible to calculate the figure for the secondary system. This would require collecting information on county projects, as well.

There have been significant efforts over the last 10 years to increase and improve preservation efforts. New and more permanent materials and repair methods have been employed. Maintenance management has been implemented and continues to improve with the development of the new Pavement Management System and Bridge Management System which integrate life-cycle costing into the preservation decision-making system. In the last biennium, \$6.5 million was added to highway maintenance materials investments.

2. Low Volume Roads on the Secondary System

Almost all the roadways on the secondary system are functionally classified as rural major collectors. Many of these routes have low traffic volumes. There is concern that if traffic volumes are used as a sole criterion to trigger preservation projects then deferred maintenance will increase the costs of reconstruction.

3. Low Volume Gravel Roads

There is considerable pressure to pave low volume gravel roads on the secondary system from their users. In many cases such routes have average daily traffic under 250 vehicles. Given the resources available, it is simply not cost effective to pave these roads. Even with available resources, once these roads are paved, the counties cannot afford to maintain them

C. Existing Modernization and Construction Goals Practices

The MDT's Geometric Design Standards (approved December 4, 1992) established new design standards for highway reconstruction and construction. These standards guide the modernization and addition of capacity that occurs as part of reconstruction. The changes lower the design goals on non-National

Highway System primary routes based on an evaluation of future use and funding constraints.

However, many roads are in need of work to meet Montana's design goals. They can not all be improved immediately and many will not be funded over the next twenty years. Therefore, to use funds effectively two key issues arise:

- Need to consider establishing minimum tolerable conditions to trigger improvements with precisely defined criteria.
- Need to consider tying capacity improvements to future traffic volumes once existing unmet needs are addressed.

1. Need to Consider Establishing Minimum Tolerable Conditions to Trigger Improvements

The MDT's geometric design standards recognize that it is not cost effective to spend money evenly over all 12,000 miles on the state's system. This could be taken a step further by establishing minimum tolerable conditions for the primary, secondary, and urban systems. Minimum tolerable conditions should not be confused with the MDT's geometric design standards which would be higher than minimum tolerable conditions in order to prevent highways declining to minimally tolerable conditions. Minimum tolerable conditions can be used to trigger needed improvements, if conditions deteriorate below the relevant standard, then an improvement program is triggered. The improvement is then undertaken to the design standards that reflect the optimum condition of the roadways in each system.

Minimum tolerable conditions can be established for construction (modernization) and reconstruction, bridge structures, and pavement preservation purposes. These standards for construction and reconstruction can be based upon general roadway standards that reduce the free flow of traffic. These can include narrow lanes and shoulders, steep and rolling terrain, sharp curves, truck and recreational vehicle volumes, and general traffic volumes. These conditions will differ depending upon the functional role or system. For example, congestion may be more tolerable on the urban system than the interstate or primary system.

Minimum tolerable conditions for triggering pavement preservation needs would be the same as the performance measures in the pavement management system. Different ratings can be applied as conditions, depending upon the system. The pavement management system being

developed by the MDT should be able to identify a cycle of pavement preservation improvements that will provide the most cost effective program of improvements for pavement preservation that factors in forecast pavement use, weather, Equivalent Single Axle Loads, and other variables into the evaluation of pavement deterioration. In this way the management system will identify pavement preservation needs, based upon assigned minimum tolerable conditions.

2. Need to Consider Tying Capacity Improvements to Future Traffic Volumes

Capacity additions not only require the initial investment in construction, but also add to all future maintenance costs by adding to the inventory of lane miles that must be maintained. To avoid building added capacity where there will not be additional traffic to justify it there is a need to tie capacity improvements to expected traffic growth and modernization needs.

As discussed above, minimum tolerable conditions could be used as a basis for triggering capacity improvements. Among the factors that could be included are whether or not the segment or corridor is forecast to exceed a certain volume within the next twenty years. The Congestion Management System is developing a series of performance measures that could be used to track this type of information.

In addition, there are other factors such as safety that are extremely important in considering capacity related improvements. In fact, many projects that result in increased capacity are primarily intended to modernize unsafe outdated roads rather than add capacity.

3. Need to Set Informed Priorities for Roadway System Performance

Roadway needs have always exceeded available funding. As discussed earlier, a key challenge for the MDT is to optimize the allocation of available funds to ensure that the roadway system's performance meets the priorities of the system users. Montana's highway users have competing and conflicting priorities. No matter how well the MDT manages the highway program the performance of the system over the next twenty years will depend upon the ability and willingness of Montanans to pay for it.

To set informed priorities it is important that Montanans understand the financial constraints affecting the preservation and development of the system. There are frequent demands for improvements that, it is argued, will facilitate economic development, however, if funded they would come at the cost of other improvements. Many jurisdictions and transportation interests have their own priorities and agendas for projects that they would like funded. These can not all be met and they do not necessarily reflect what is in the general interest of the state.

Establishing overall priorities for road system needs is critical. Implicit in the types of funding decisions that have been made in the past five years is that preservation is a high priority. The resulting benefits have been seen in terms of improved pavement conditions. However, as a guide to program development and project selection it will be valuable to establish a framework for ranking priorities.

This framework could distinguish between preservation of the current system, safety improvements, capacity expansion and other types of facility upgrades.

4. Current Methods and Materials

There has been increased attention over the past ten years toward improving preservation and maintenance methods and materials. More permanent materials are being utilized, for example, the use of plant mix asphalt paving instead of cold mix repairs. Corrosion resistant culvert materials are being utilized in areas that have highly corrosive soils.

In the eastern part of the state, obtaining good aggregates for either new construction or maintenance is a difficult proposition that adds to the cost for both routine maintenance and construction. Haul distances for the good aggregate are longer, which results in increased costs and can create scheduling problems.

Recently, a Maintenance Review Section was established to analyze available data and make decisions. This should help to further improve methods and materials.

POLICY PAPER**III. POLICY GOALS AND ACTIONS**

This section outlines the policy goals and actions for addressing roadway system performance issues adopted by the TranPlan 21 Steering Committee.

A. POLICY GOAL A. - Establish Explicit Priorities for Roadway Improvements

This policy goal establishes explicit framework for prioritizing projects and developing the State Transportation Improvement Program. The policy's intent is not to use all funds solely for preservation projects but to establish the MDT's overall priorities. In implementing TranPlan 21, the programming process will establish a balance between funding these different priorities for roadway improvements. However, this cannot be accomplished until the safety, pavement, and other management systems are in place to provide the analytical basis for establishing funding goals for the different priorities. The following lists the overall roadway priorities established by TranPlan 21:

First Priority - Preservation of Montana's Existing Highway System which Includes Reconstruction.

This prioritizes preservation because roads that are not properly maintained and preserved will result in:

- Large increases in repair costs.
- Operating cost increases for road users.
- Increases in accident rates.
- Increases in environmental damage.
- Increased travel delays.
- Increased tort liability.

Second Priority - Safety Improvements.

In addition to the safety improvements associated with the system preservation and reconstruction, other improvements are needed to improve safety. These improvements include minor widening, elimination of dangerous curves, providing passing lanes, improving dangerous intersections, and certain bridges.

Third Priority - Capacity Expansion.

Capacity expansion is needed in certain corridors to reduce congestion and maintain levels of service. The capacity of some roads will need to be expanded over the next twenty years.

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Fourth Priority - Other Improvements.

This includes upgrades, such as paving low volume gravel roads.

Action A.1. Establish a process for ensuring project selection reflects policy and planning goals.

This action involves establishing a process that will ensure that the MDT's expenditures reflect policy and planning goals. It will involve establishing a task force involving headquarters staff and district engineers to develop criteria and a process that will tie project selection decisions to planning and policy goals. There will be a need to coordinate state and metropolitan planning organization and small urban area planning goals in developing the project selection process and criteria.

Level of Effort:

Initial Year 1: 1,200 staff hours

Annually: Include in STIP process

Timing: 1995 to 1996

B. POLICY GOAL B. - Systematically Modernize Montana's Highway Infrastructure

Action B.1. Continue to use the existing Geometric Design Standards for preserving and developing the highway system.

The Geometric Design Standards used by the MDT were developed as recently as 1992. This was the result of a major effort and circumstances have not changed to warrant a major review of the Standards. The existing design standards provide the most effective basis for planning the long term management and development of the system. The recently adopted Design Standards involved scaling back many previous design goals.

Level of Effort:

Initial Year 1: No increase in effort

Annually: No increase in effort

Timing: Currently implemented

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Action B.2. Establish criteria (goals and standards) to be used to determine reconstruction needs and whether to add capacity.

Many of Montana's highways will continue to have relatively low traffic volumes. These criteria will be used to avoid "overbuilding" in corridors where current and forecast volumes do not warrant capacity expansion. These criteria will include many of the different elements that are part of the sufficiency rating.

Applying such criteria will help the MDT to rely on technical data and expertise to justify widening rather than less dependable factors. In some cases widening will be justifiable based upon safety alone or safety combined with traffic volumes. The ISTEA management systems will provide the data required to measure these goals and criteria. The specific criteria can be used in the project selection process.

Level of Effort:

Initial Year 1: 800 hours implement in conjunction with Action A.1

Annually: No increase in effort incorporated into management system and program development work

Timing: 1995 to 1996

Action B.3. Establish and implement proactive right-of-way preservation in corridors forecast to have capacity constraints over the next twenty years.

TranPlan 21 has forecast growth in traffic volumes over the next twenty years. As part of the congestion management system development, these forecasts are being used to anticipate future congestion and level of service degradation in Montana's major corridors. This action involves ensuring that active right-of-way preservation is targeted in corridors that are likely to have the greatest need of capacity related improvements over the next twenty years.

Action B.4. Inform local planning and development officials of the state's desire to preserve these corridors and the extent of local responsibilities in this regard.

This action involves working with local jurisdictions to ensure that their decisions do not impact right-of-way preservation.

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Level of Effort:

Initial Year 1: 480 staff hours

Annually: 320 staff hours

Timing: Initiate in 1995

Action B.5. Encourage local jurisdictions to address right-of-way preservation in local land use plans and any access management programs.

The TranPlan 21 Access Management and Land Use Planning Policy Paper noted increased local interest in land use planning and outlined the benefits for system performance of access management. This action will involve ensuring that local land use planning address right-of-way corridor preservation.

Level of Effort:

Initial Year 1: 640 staff hours

Annually: 480 staff hours

Timing: Initiate in 1996

Action B.6. Establish and fund a program, if necessary, for acquisition of right-of-way on highways that are currently congested and TranPlan 21 forecasts indicate will be congested in the next twenty years.

While it is difficult to set aside funding for right-of-way acquisition, particularly in the face of critical needs for preserving the physical infrastructure, the life cycle cost will be less because the right-of-way will be acquired at lower cost than it would be after development is allowed to occur. In addition, acquisition costs in high growth areas will increase dramatically.

This action involves allocating funds as needed in the first year of plan implementation to fund right-of-way acquisition in corridors with forecast capacity needs. The budget will then be adjusted, based upon experienced need and known acquisitions.

Level of Effort:

Initial Year 1: 500 staff hours, \$250,000 budget for program

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Annually: 500 staff hours. Program allocation to be adjusted based on first year's experience

Timing: Initiate in 1997

Action B.7. Use the Pavement, Maintenance, and Bridge Management Systems to coordinate maintenance work with other construction work.

This action will coordinate maintenance work with other construction work so that a section of road is not worked on twice within a short period of time. While this sounds simple, it is not always accomplished. The action will involve coordinating the strategies from the management systems with programmed improvements. Where possible, maintenance work will be combined with improvement projects without causing delay. In other cases the maintenance schedule will be adjusted.

Level of Effort:

Initial Year 1: 500 staff hours

Annually: 500 staff hours

Timing: Initiate in 1996

C. POLICY GOAL C. Enhance the Multimodal Role of the Roadway System.

This policy goal involves ensuring that highway modernization accounts for the multimodal role of the roadways in Montana. Other actions that advance this role are included in the Public Transportation and the Bicycle and Pedestrian Facilities Policy Papers.

Action C.1. Include consideration of public transit needs in updates to the Geometric Design Standards.

The technical analysis undertaken as part of TranPlan 21 indicates that public transportation is not currently likely to change the need for capacity improvements. In some parts of the state, population growth and the related increase in travel demand will result in needs for capacity improvements over the next twenty years. Increased population will increase the demand for transit and automobile use and will create more potential for modal trade offs. This action establishes options for including consideration of how to accommodate public transportation most effectively on Montana's highways as demand for it increases

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and how to provide infrastructure that supports modal trade offs and an increase in ride sharing.

Action C.2. Use the Congestion Management System to identify corridors where public transportation could reduce the need for capacity improvements.

TranPlan 21 technical work found that there is little current potential to make modal tradeoffs between public transportation and automobile demand. However, as population grows in western Montana and in urban areas, the potential for modal trade offs will increase. This action involves using the Congestion Management System to identify where there will be future potential for modal tradeoffs and highlights these corridors and facilities in future updates to the Geometric Design Standards. This will ensure that where transit is present, it is accommodated by the highway system so as to provide safe and efficient service for the transit customers as well as other users of the highway system.

Level of Effort:

Initial Year 1: Include as part of Congestion Management System maintenance and reporting responsibilities

Annually: Include as part of Congestion Management System maintenance and reporting responsibilities

Timing: Initiate in 1996

Action C.3. Identify criteria and locations for transit supportive design.

This action involves anticipating future transit use of the highway system in the criteria and guidelines for project development. This will require working with transit system operators to identify any high volume locations where bus turn-outs or other transit supportive design features are justified. This will also include locating park-and-ride or park-and-pool lots to help reduce vehicular volumes on routes that are forecast to carry high peak hour single occupant vehicle passenger volumes.

Level of Effort:

Initial Year 1: 800 staff hours to develop agreed criteria and identify locations

Annually: 200 Additional staff hours

Timing: Initiate in 1996

D. POLICY GOAL D - Identify and Deploy Cost-Effective Intelligent Transportation Systems Applications To Improve Safety and Capacity

In considering this policy goal, it is important to note that TranPlan 21 is a twenty year plan. In this time frame intelligent transportation system applications will most likely be developed, tested, and deployed nationally. The MDT is already participating in their use for interstate commercial vehicles.

While many of the intelligent transportation system solutions may appear far-fetched, there is a high expectation that their application will reduce physical construction costs. Many new technologies for vehicles, roadways, and public transportation operations will become available over the next five to ten years. This policy will direct the MDT to prepare to take full advantage of the efficiencies to be gained from these technologies as cost-effective methods to get the most out of the existing system.

Action D.1. Develop the MDT's intelligent transportation system plan as the basis for evaluating, and where cost effective, deploying advanced vehicle technologies in lieu of highway system improvements to improve safety and capacity.

This action involves the MDT working with Montana State University to develop an intelligent transportation system strategic and tactical plan. Ongoing work will involve monitoring the development of intelligent transportation system applications and their applicability to Montana. The federal government has placed emphasis on identifying rural intelligent transportation system applications. This action will involve pursuing opportunities for Montana's participation in federal programs and demonstration projects.

Implementation of the action involves establishing an advanced technologies task force within the MDT to monitor and identify the applicability of intelligent transportation system applications in Montana. Task force members will represent different functional areas in the department and be responsible for tracking technological developments that are applicable to their function. This will support the MDT's current collaboration with Montana State University and the Western Transportation Institute.

Among the intelligent transportation system applications to be considered are run-off-the-road collision avoidance systems and the use of drowsiness alarms. In the future, on low volume roads that have safety problems due to inadequate width,

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it may be substantially less costly to purchase run-off-the-road collision avoidance systems for all regular users than to widen the road. The national Intelligent Transportation System Strategic Plan includes land and road departure warning in its middle term (10 year timeframe) operational testing program and warning systems for distant obstacles, land departure, lane change and merge, and roadway conditions in its middle term deployment program. Deployment of these systems is slow as much due to legal reasons as due to technical reasons. Automobile manufacturers do not relish the thought of a shift of legal responsibilities for collisions from the driver to the manufacturer.

The plan will explore deployment of commercial vehicle applications to prevent congestion and safety problems at weigh stations. The MDT is participating in initiatives to use intelligent transportation system applications to reduce congestion at weigh stations and to improve their general efficiency. These applications will likely allow automated credentials verification and preclearance of weigh stations. This application will reduce administrative time, increase the system's effectiveness, improve safety and weight enforcement.

Level of Effort:

Initial Year 1: 1,200 staff hours to prepare plan

Annually: 400 staff hours

Timing: Initiate in 1996

Action D.2. Encourage the metropolitan planning organization areas to include consideration of intelligent transportation systems in their long range plans.

It is unlikely that Montana's urban areas will reach the levels of population in which system performance can be improved through these types of systems. However, this action will encourage metropolitan planning organizations to consider intelligent transportation systems over their long range planning horizon.

E. POLICY GOAL E - Preserve highway pavement conditions at existing or higher levels on the interstate and primary system. Establish goals for improving secondary system pavement conditions.

As documented earlier, virtually the entire interstate and primary system has pavement conditions that are fair or better. However, there is no information from which to evaluate pavement conditions on the secondary system. This policy

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goal involves actions for preserving and improving the existing conditions on the interstate and primary system and establishing goals for the secondary system using the pavement management system.

Action E.1. Ensure that the Pavement Management System is used as a planning, program development, and engineering tool.

The Pavement Management System is an extremely powerful tool to help the MDT make better decisions. The Pavement Management System that is being developed by the MDT will utilize life-cycle costing to evaluate various forms of investment in the pavement infrastructure. The Pavement Management System will enable MDT to make very informed decisions regarding maintenance and preservation investments. It will then provide timely feedback on the effectiveness of those decisions.

It is expected that the Pavement Management System will show that an increased level of investment in early and frequent routine maintenance is desirable in order to reduce life cycle costs and increase life cycle benefits. This assumption is consistent with engineering research and previous statewide studies. The subject of preservation needs and practice will need to be revisited after the Pavement Management System is on line and is providing reports.

The most important issue associated with the management system is ensuring that it provides information that is useful for planning and program development.

Action E.2. Ensure use of Pavement Management System is institutionalized

This action involves ensuring that all relevant MDT divisions and districts learn about Pavement Management System capabilities and establish procedures for using its output.

Level of Effort:

Initial Year 1: A further 1000 hours of staff time from various divisions to participate in system development and analysis of data.

Annually: A further 1000 hours of staff time from various divisions to participate in system development and analysis of data.

Timing: Immediately

Action E.3. Develop ways to evaluate techniques and materials through the management system to ensure long-term performance.

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This action involves further use of the Pavement Management System.

Level of Effort:

Initial Year 1: 480 staff hours

Annually: 480 staff hours

Timing: 1997

Action E.4. Use the Pavement Management System to define strategies and funding levels that will maintain existing performance.

Existing pavement conditions will be used as a performance goal for constraining the pavement management system that is currently being developed by the MDT. This action will use existing conditions as the pavement performance goal against which the optimal combination of pavement strategies will be identified. These strategies will then be used to guide the types of projects selected and the balance between construction and preservation-related projects.

Level of Effort:

Initial Year 1: Incorporate as part of staff responsibilities

Annually: Incorporate as part of staff responsibilities

Timing: Immediately

Action E.5. Monitor and determine the impacts of the North American Free Trade Agreement upon Montana's transportation facilities..

There is an expectation of increased shipments between Canada through Montana to the southwest U.S. and beyond. Because Alberta permits heavier loads than Montana, there is concern that these heavier loads will cause increased deterioration and affect the safety of Montana's bridges should they be widely permitted within the state. This action will continue existing research to determine the impacts upon Montana's bridges and highways of increased commercial vehicle traffic from Canada.

Action E.6. Regularly update the cost allocation study to ensure equity in user fees and include analysis of secondary system use.

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This action involves updating the cost allocation study to ensure equitable fees for highway use. Future updates will address secondary system use and any additional impact on pavement and bridge conditions arising from North American Free Trade Agreement-related traffic are financed by this traffic.

Level of Effort:

Initial Year 1: 800 total staff hours

Annually: To be determined

Timing: Initiate 1997 to 1998

Action E.7. Do not increase the MDT's maintenance responsibilities

There are tendencies for many groups to view the highway budget based on its raw size without regard to needs and conclude that there is money available for other purposes. There is continuous pressure from local governments to shift their maintenance responsibilities to the state. One of the reasons is that local tax bases are weak and not dedicated to transportation. Property taxes are the primary source of funding for local governments to maintain roads in addition to most of their other governmental functions including schools. Therefore, they essentially have a freeze on available funds, and many of their other programs are dramatically escalating in cost.

Level of Effort:

Initial Year 1: Incorporate as part of existing staff responsibilities

Annually: Incorporate as part of existing staff responsibilities

Timing: Immediately

Action E.8. Use the Pavement Management System to assist local jurisdictions to understand their preservation needs.

The MDT is working with counties to collect data as part of Pavement Management System implementation. Disseminating the results will help counties make better preservation decisions in selecting secondary system projects and spending their funds off system. However there is concern that increased data collection burdens may limit county and metropolitan planning organization participation.

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Level of Effort:

Initial Year 1: Incorporate as part of Pavement Management System responsibilities

Annually: Incorporate as part of Pavement Management System responsibilities

Timing: Immediately

Action E.9. Establish maintenance standards and goals to complement the Geometric Design Standards.

This action establishes goals and criteria that will be used to trigger maintenance improvements. Include pavement conditions, accident history and other safety considerations as factors in targeting maintenance resources.

Level of Effort:

Initial Year 1: 640 staff hours

Annually: 320 staff hours

Timing: 1995

Action E.10. Prioritize system preservation and maintenance

Although data from the Pavement Management System are not available, the current maintenance cycles described earlier indicate the likely need for increased maintenance. When funding levels are inadequate, pavement conditions deteriorate to fair or poor conditions that are intolerable to the travelling public, requiring rehabilitation or reconstruction to return them to tolerable conditions. Great public pressure to repair the fair and poor pavements results in a large allocation of resources to rehabilitation or reconstruction. Because total resources are limited, this allocation results in decreased allocations in other areas, such as routine maintenance. Life cycle costing analyses show that deferred routine maintenance results in even more pavements deteriorating to the fair or poor conditions, and the cycle repeats.

Action E.11. Use the Bridge Management System as a planning, program development, and engineering tool.

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The Bridge Management System is a valuable tool. The Bridge Management System that is being developed by the department that will utilize life-cycle costing to evaluate various forms of investment in the bridge infrastructure. The Bridge Management System will enable the MDT to make very informed decisions regarding the maintenance and replacement needs of the state's bridges. It will then provide timely feedback on the effectiveness of those decisions.

This action involves using the Bridge Management System to determine preservation needs and to define the most cost effective strategies.

Level of Effort:

Initial Year 1: To be determined

Annually: To be determined

Timing: To be determined

Action E.12. Provide and disseminate transportation system preservation and maintenance information.

This action involves developing an ongoing communications program to educate and inform the members of the state legislature and the public regarding system maintenance achievements, activities, and needs. Frequently there is public pressure to make investments that are not cost effective, in simple terms the argument is "do the worst first." This is not the most cost effective practice.

A continuous communications program that educates the public and transportation stakeholders about needs as well as improvements and successes of the transportation program will help build credibility and cooperation for cost effective strategies.

The public is the primary customer of the transportation system. They deserve to be informed about the program, and when properly informed, have a better understanding of the problems involved.

Implementing the action will involve including summary reporting in design of management systems to present a clear picture of overall needs and disseminating information that reports accomplishment. The action involves preparing facts sheets reporting on system conditions and achievements. Oriented to transportation stakeholders, the legislature and the public, this will increase understanding about transportation system management.

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Level of Effort:

Initial Year 1: 640 staff hours

Annually: 480 staff hours

Timing: Initiate 1996

F. POLICY GOAL F - Improve Construction and Maintenance Techniques and Materials

This policy goal is designed to continue to improve construction and maintenance techniques and materials to optimize return on expenditures and improve the service life of the highway infrastructure.

Improved techniques will provide a higher quality product, which is essential in realizing the full benefits of early routine maintenance procedures.

Action F.1. Continually review maintenance operational procedures for efficiency and effectiveness improvements.

Level of Effort:

Initial Year 1: 1000 hours of staff time

Annually: To be determined

Timing: 1996

This action involves:

- Continuing with the implementation of the Maintenance Review Section and use to review procedures.
- Prioritizing major maintenance operations and assigning a team to review each operation for efficiency and quality of the operation. Where quality and efficiency conflict, choose quality.
- Establishing processes within maintenance operations to continually solicit all maintenance employees' ideas for improving quality and efficiency.
- Developing a listing of laws, regulations, and agreements that adversely impact the ability to improve operations; prioritize the list as to the most

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important and most feasible to modify; and begin efforts to obtain favorable modification to the law, regulation, or agreement.

- Continuing to contract and/or privatize where feasible.

Action F.2. Review procedures for testing and accepting maintenance materials to ensure quality materials.

This action will ensure that high quality maintenance materials are used. Just as procedures are important for the success of the routine maintenance activities, materials are critical for quality results and will be given just as much attention in maintenance as in new construction.

Level of Effort:

Initial Year 1: 480 hours of staff time.

Annually: To be determined

Timing: 1996

Action F.3. Utilize the Maintenance Review Section and the Construction Review Section, through the Materials Bureau, to further review the problem of poor aggregates and availability throughout the state.

Level of Effort:

Initial Year 1: Include as part of ongoing work.

Annually: Include as part of ongoing work.

Timing:

Action F.4. Review department procedures for testing and accepting new materials and procedures developed through research and development.

This action will continue to ensure the use of good materials and procedures and hence quality maintenance. Using the most up-to-date methods and materials as soon as they are available and proven will also greatly impact this effort.

Action F.5. Continue ongoing communications processes with contractors and materials suppliers to improve results.

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This action ensures that the MDT will continue to meet regularly with contractors and suppliers to discuss the service delivery process, new methods, and materials.

Level of Effort:

Initial Year 1: 64 hours of staff time

Annually: 64 hours of staff time

Timing: 1995

Action F.6. Continue efforts to review bidding procedures to determine if there are any impediments to implementation of new methods or materials.

Sometimes bidding procedures, such as requirements for alternate bidding and requirements to include more than one supplier, can get in the way of utilizing effective materials. This action ensures that the MDT will continue to explore contract warranties.

Action F.7. Establish a task force including contractors and suppliers to review the bidding situation.

Level of Effort:

Initial Year 1: 320 hours of staff time.

Annually: Not applicable

Timing: To be determined

IV. POLICY GOALS AND ACTIONS NOT ADOPTED

The following policy options were not adopted.

Action. Modify the geometric design standards by increasing the mileage in the "maintain existing level of development category".

Reason: The current geometric design standards were developed as recently as 1992. Circumstances have not changed that warrant another review.

This action will reduce the mileage that will be subject to capacity improvements and other modernization as part of construction and reconstruction.

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Action. Modify the geometric design standards by changing the geometric standards themselves.

Reason: *The current geometric design standards were developed as recently as 1992. Circumstances have not changed that warrant another review.*

The standards will be modified to provide a variable scale of improvement geometrics based upon traffic volumes and other indicators. Alternative design standards that will be considered include, as a possible cost effective solution, two lane facilities with properly designed passing lanes, particularly in high truck or recreational vehicle volume situations combined with hilly terrain.

Action Continue to maintain pavements at existing funding levels and with existing mix of routine maintenance, rehabilitation, and reconstruction.

Reason: *It is premature to establish planning goals in this area. The Pavement Management System will generate the information required to do this in 1995.*

This action will maintain the existing balance between maintenance, preservation-related rehabilitation and reconstruction, and construction.

Action. Maintain pavements at existing funding levels but with a change in strategies to decrease rehabilitation and reconstruction and increase routine maintenance.

Reason: *It is premature to establish planning goals in this area. The Pavement Management System will generate the information required to do this in 1995.*

This action undertakes more preservation-related projects as opposed to construction. This action prejudices the expectation that the Pavement Management System results will confirm the research literature that early and frequent routine maintenance will result in lower life cycle costs and higher user benefits to the public in the form of smoother pavements that cause less vehicle wear and tear. Therefore, prudent life cycle cost investment for Montana will require increasing investment in early and frequent routine maintenance.

At existing funding levels this requires less funding of rehabilitation/reconstruction projects. This strategy may be unpopular with the public, but eventually will provide higher overall pavement conditions, even though there might be some miles of severely deteriorated pavement.

Action. Contract with a university or private research/testing firm to evaluate the problem of the shortage of good aggregates and cost effective ways to obtain the best aggregates in each area of the state.

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Reason: The MDT has already identified solutions to these problems.

Level of Effort:

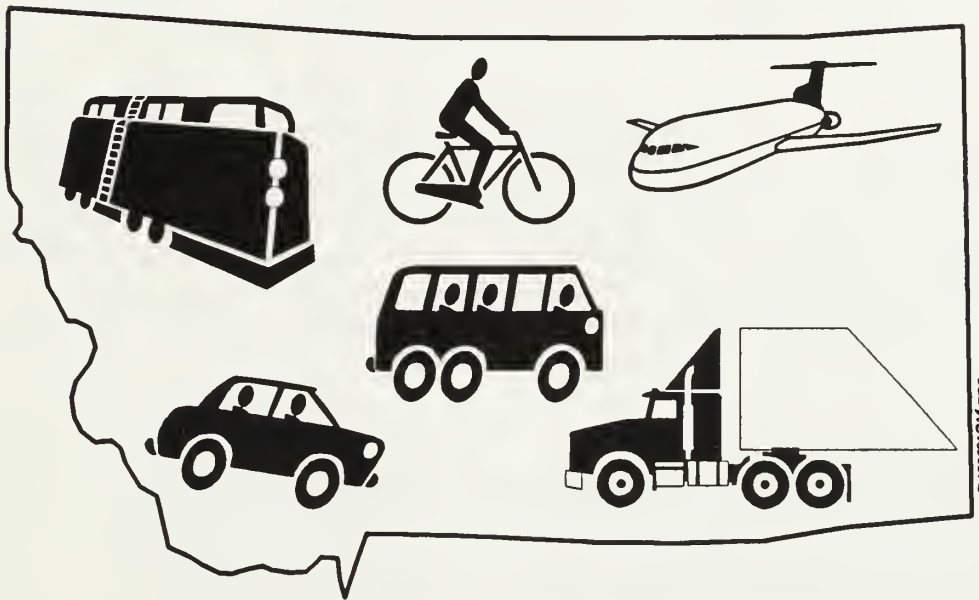
Initial Year 1: 400 hours of staff time and \$200,000 for research contract.

Annually: Not applicable.

Timing: 1996

Montana Department of Transportation

TranPlan 21



Access Management and Land Use Planning Policy Paper

prepared by

DYE MANAGEMENT GROUP, INC.

in conjunction

Cambridge Systematics

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I. ACCESS MANAGEMENT, LAND USE PLANNING AND TRANSPORTATION IN MONTANA - BACKGROUND

This policy paper addresses access management on the Montana highway system and the broader issue of coordinating land use and transportation in Montana. For both areas the paper describes current practices, the major issues, and the policy goals and actions adopted through TranPlan 21 for addressing the issues.

A. Access Management on the Montana Highway System

Access management is the strict control of the design and operation of all driveways and public street connections onto highways. Regulations address elements such as driveway spacing, intersection and traffic signal spacing, denial of access requests, and geometric design standards. These standards should reflect differences in urban and rural areas, as well as in the hierarchy of functional classes, allowing greater degree of access on lower volume and speed routes, while being more strict on higher volume and speed routes.

1. Overview

Management or control of vehicular access to the system of state highways and arterial roadways is a practice that has gained increased attention in recent years as a means of preserving and enhancing system performance. Several western states, including Colorado and Oregon, have adopted more comprehensive access management programs that go well beyond the traditional treatment of access as simply a right-of-way issue. This movement is consistent with the overall direction of transportation planning in the ISTEA era, during which as much attention will be paid to highway maintenance as to capital construction. States are looking to access management as an essential tool for preservation of the functional integrity and hierarchy of the existing highway system.

2. Current Practices in Montana

The need for access management in Montana has been raised directly and indirectly in the issue identification process. Summary results of the key highway issues note that the system is basically complete, and that the focus should shift to preservation and maintenance. In addition, it has been noted by MDT staff that enhancement of access management standards, and more rigorous enforcement of those standards, is desirable

from the Department's standpoint of maintaining safety and system performance.

Access management in Montana is not defined or implemented to the same degree as it is in several states with more aggressive, proactive programs. In general, the State has exhibited less tendency towards planning, regulation and growth management than other states. This is particularly true in locations outside of the major cities, where the state highways often serve as the principal route through town. In those locations, relatively easy and under-regulated access to the network of state highways seems to be an assumed right accorded to property owners.

As recently as April 1992, the Highway Commission adopted an Access Management Plan developed by MDT staff. That document did not represent a significant departure from previous policy. Rather, it appears mainly to have clarified the process by which an existing access control regulation can be modified to allow access at points that were not granted at the time the access rights were originally acquired from the property. The current plan does not contain any specific criteria or thresholds for applying access management policies or techniques. This lack of clear policy guidance has contributed to the current situation.

3. Access Management Strategies and Mechanisms

The specific methods and criteria for determining how much access to provide, and how to physically provide or limit access, are the elements of an access management strategy. Successful access management strategies include:

- A classification system, defining the "access class" for each facility in the state system.
- Standards for determining what level of controls appropriate for a given area and facility type.
- Criteria which define the preferred characteristics within an access class; examples include criteria for minimum intersection and driveway spacing, installation of barrier medians, location of median breaks, turn prohibitions at intersections and driveways, use of frontage roads, traffic signal spacing, etc.

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- Procedures for handling requested variances from the standards.

Additional components might include a permit or fee system, guidelines for "grandfathering" existing access, and administrative responsibilities.

Other than the traffic engineering tools noted above, other techniques that a state may use to effect access management include the following:

- **Acquisition of Access Rights.** The state has the power to purchase access rights or restrictions. These may be used to control the location and number of access points to a given parcel, as well as to limit changes in the use of an access point if that change would generate additional demand on the arterial roadway.
- **Statutory Access Control.** The state may declare a roadway as a controlled access facility, typically in the interest of public safety, convenience and welfare. This is most readily accomplished in corridors where development pressures have not yet surged, and where the existing level of access is minimal. Criteria or thresholds should be established to determine when a route may be declared limited or controlled access.
- **Subdivision Regulations.** The state has no authority to review subdivision plans. This is undertaken at the local level. This strategy is most suited for local government to ensure for, example, that the development has adequate internal circulation, setbacks, and not direct access onto highways from individual lots.
- **Driveway Permit System.** The state (as well as lower levels of government) have the authority to require a permit for construction of a private driveway onto a public road. This may also be used to prevent further access from the same parcel in the future (restrictive covenant.)
- **Official Mapping.** The state and most levels of government, by officially mapping a future transportation corridor or improvement, have the authority to retain full access control over the planned facility. Limitations may apply to Montana's ability to officially map a state highway improvement until alignment studies and environmental analysis has been completed, however.
- **Corridor Planning.** Multi-jurisdictional planning efforts, authorized by state and federal statutes, may be used to develop

corridor plans. The plans could include specifics as to how corridor preservation and access management will be achieved, and the type and scale of development which will be encouraged through specific access locations, frontage roads, and other physical techniques. MDT's corridor preservation report, "The Preservation of Right-of-Way for Transportation Corridors", provides a good starting point for this type of approach in Montana.

- **Land Use Planning and Zoning.** This is predominantly the domain of local government. However, MDT can control access to state facilities, and thus exerts some influence. The state, through a technical and policy support role, can impact the development of land use plans and zoning ordinances in a way that favors access management. The potential value of a supportive role, rather than a regulatory one, should not be dismissed. The most damage, or the most benefit, can be had during early stages of development pressure, before a locality has the presence, expertise or resources to define access management strategies. By providing support such as model ordinances, site design and access guidelines, and even review of applications, the state could affect important development decisions in critical "formative" years of a corridor's urbanization.

Many of the potential strategies noted above for access management may also be applied to corridor preservation efforts, for example:

- **Land Purchase.** Many techniques are available to help ensure that land is available for additional right-of-way when and if needed. These include outright purchase, purchase of easements, and land-banking. Disadvantages include the difficulty of predicting with accuracy the final alignment of a transportation project, and the inefficiency/unpopularity of committing scarce funds for projects with such a long term payback.
- **Official Mapping.** As noted above, official mapping of future transportation corridors may be necessary to effectively prevent development from taking place within the corridor. To avoid "taking" battles, and other property rights challenges, some care must be exercised in the timing and duration of such techniques.
- **Setback Standards.** These must be used with care to reserve land for future expansion of existing facilities, perhaps including

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frontage roads. Setback standards that promote public safety and welfare (for example, safety buffers of sight clearance) do not require compensation of land owners. Conversely, setbacks for the sole purpose of reserving land for future roadway widening will generally result in a "taking" action requiring compensation.

- **Dedications.** Dedications are typically requested at the state level only when a development has access onto a state facility. Local government may use this technique liberally in exacting land for necessary improvements. A recent ruling of the U.S. Supreme Court places more stringent burden of proof upon government in establishing proportionality and nexus between the impact and the dedication, however.

B. Current Land Use Planning Authority in Montana

Montana has no enabling legislation that provides for protection of land use at the state level. Authority for land use planning is at the local level. Local jurisdictions have the authority to address land use planning through: a comprehensive plan, sub-division laws, and zoning regulations. The Montana Department of Commerce, Community Technical Assistance Program has documented land use planning authority in Montana in a technical assistance booklet (A primer on Land Use Planning and Regulation for Local Governments, 1994).

Following describes the existing authority:

1. Comprehensive Plan

The Local Planning Enabling Act (76-1-101 through 76--1-606, Montana Code Annotated) enables local government to prepare a comprehensive plan and sets out the required procedures. If enacted, the comprehensive plan must cover the entire jurisdiction and address all aspects that affect the community's public facilities, transportation, parks, recreation, economy, and housing. The planning jurisdiction may focus on incorporated urban areas or may include the entire county.

Montana law requires that zoning and development permit regulations conform to an adopted plan. The purpose of this requirement is to ensure that land use regulations are drafted and enforced in the context of the comprehensive plan. Regulations adopted in conformance with a plan are less likely to be arbitrary than those adopted in isolation. Prior adoption

of a comprehensive plan is not a prerequisite for a local government to adopt subdivision regulations. In fact, state law requires all units of local government to adopt and enforce subdivision regulations, regardless of whether they have a plan. Both the Montana Local Planning Enabling Act and the Montana Subdivision and Platting Act authorize local governments to consider compliance with an adopted comprehensive plan as a criterion for approving or disapproving a proposed subdivision (76-1-606 and 76-3-604, Montana Code Annotated).

2. Sub-Division Laws

Sub-division laws regulate the process of platting land into lots and providing public facilities (roads, water, sewer, storm drainage) to the lots. Before approval is granted, local governments must evaluate a proposed sub-division's impact. This involves an assessment of the anticipated needs of the proposed subdivision for local services including roads and maintenance. Montana law requires all units of local government to adopt and enforce subdivision regulations and review development proposals that divide land into parcels less than 160 acres. Local governments that have a comprehensive plan may use it as an evaluation tool to ensure that the proposed sub-division conforms to the plan. This strengthens the authority to secure developer funding for road improvements "directly proportional to the impact" the development has on the transportation system.

3. Zoning

Zoning is a legal tool by which local governments can protect the health, safety, and welfare by dividing jurisdictions into use districts (zones), restrict various uses to certain zones, and impose requirements that permitted uses must meet. In Montana, three different statutes authorize local governments to enact zoning regulations, however, zoning is not mandated. Cities and towns may adopt and enforce zoning ordinances under the Municipal Zoning Enabling Act; counties may enact zoning under the County Zoning Enabling Act, and the third statute, the County Planning and Zoning Commission Act, allows a county to enact land use regulations for an area within the county where at least 60 percent of the property owners sign a petition requesting formation of a district and adoption of regulations.

Both the Municipal Zoning Enabling Act and the County Zoning Enabling Act require that the local government have an adopted comprehensive plan for the jurisdiction and that the zoning regulations conform to the plan.

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The statute authorizing zoning by petition does not require the county to have an adopted comprehensive plan, but the planning and zoning commission must prepare a development pattern for the district that identifies the desired location or requirements for future development.

Under any of the three zoning enabling statutes, local zoning regulations must provide a process for hearing and deciding appeals. For municipal and county zoning, the governing body is required to appoint a board of adjustment to make special exceptions, grant variances, and hear appeals.

Municipalities and counties are authorized to adopt interim land use regulations while a comprehensive plan is being prepared and adopted. The purpose of the interim zoning is to protect the integrity of the prospective plan from incompatible development while the plan is being prepared and adopted.

The Municipal Zoning Enabling Act allows a city or town to adopt extraterritorial zoning--regulating land use in the unincorporated area contiguous to the city limits. Extraterritorial zoning ensures that adjacent growth to the jurisdiction is compatible with the land-use patterns of the city.

C. Development Permitting in Montana

Many planners and local officials in Montana have expressed interest in alternatives to zoning as a means to regulate land use. One alternative, using existing state enabling statutes involves development permit regulations. Development permit regulations may be used to affect the character and quality of new development as opposed to zoning which affects the location. Development permit regulations may be adopted under any of the three zoning enabling statutes.

Development permit regulations may be used to implement a jurisdiction's land use plan and affect transportation impacts by having different requirements for different areas in a county. For example, there could be more specific requirements to manage growth in incorporated and unincorporated communities and less restrictive or specific standards adopted to govern development in the rest of the county.

There are three types of approaches to development permitting that can be used to affect the transportation impacts arising from land use:

- **Design standards.** These are specific quantitative standards that regulate the design and location of new development.
- **Performance standards.** These are tailored to regulate the effects of a development. Local officials can require minimum standards for air, water, solid, noise, dust, smoke emissions, or traffic safety.
- **Land capability standards.** Land compatibility requirements are based on the capability and suitability of the physical environment to accommodate development. This could include the capacity of adjacent streets.

D. Status of Land Use Planning in Montana

In the past, outside of Montana's major cities there has been little local interest in planning for and regulating development. Despite having the option of preparing a comprehensive plan, many counties and cities have not. Those counties that have prepared comprehensive plans have not enacted comprehensive zoning ordinances to guide implementation.

Presently in Montana, 36 out of 56 counties have completed comprehensive plans, all 128 municipalities and all 56 counties have subdivision regulations, 21 municipalities have zoning, no counties have traditional jurisdiction-wide zoning, four counties have different types of development permit regulations based on zoning, although several counties have intermittent citizen-initiated zoning districts (Montana Department of Commerce). There is currently a major citizen based planing effort underway in Flathead County, where a performance based permit system is being recommended to control development.

There is a lack of money and expertise in many local jurisdictions to undertake land use planning. During the 1970s the United States Department of Housing and Urban Development provided funding for municipal and county planning projects and circuit riders from the Department of Commerce to work with the rural communities to develop land use plans. Consequently, a number of Montana's city and county comprehensive plans were completed in the 1970s and have not been updated, amended or implemented since then. They may not accurately reflect the dynamics and trends occurring in the 1990s nor be prepared for the impact of the 21st century.

E. Coordination of Transportation and Land Use Planning

The Intermodal Surface Transportation Efficiency Act (ISTEA) requires statewide and metropolitan planning organization (metropolitan planning organization) area planning to consider the effect of transportation decisions on land use and land development. Consideration of land use is to include "the need for consistency between transportation decision making and the provisions of all applicable short-range and long-range land use and development plans." (23 CFR part 450.208). This creates difficulties for Montana because there is only limited land use planning to coordinate transportation with.

II. ACCESS MANAGEMENT AND TRANSPORTATION-RELATED LAND USE ISSUES

A. Issues Raised By Citizens

Despite the limited experience with land use planning in Montana, there is growing interest at the local level, especially in the faster growing communities, in using land use planning to manage growth, preserve the quality-of-life, and to protect the environment. This interest is also reflected in a range of general transportation-related issues identified for the statewide plan.

These issues include:

- Concern about the increasing demands placed upon the highway system as a result of new development patterns.
- Recognition that current development patterns, access management practices, and lack of land use planning reduce the effectiveness of the transportation system.
- Reluctance to address new transportation demands through increased capacity.
- Desire to see transportation system management, demand management, and other modal options pursued to meet increased transportation demand.
- Recognition that land use decisions affect transportation.

In general, it is difficult to address these issues with only limited land use planning.

B. Issues Arising From Existing Conditions and Practices

- **Lack of consistent rigorous application of access management policies**

On the Interstate Highway system complete control of access is federally regulated and achieved through strict geometric design standards. Not only the design of interchanges, but the spacing between interchanges is specified for urban and rural conditions.

On the system of state arterial highways, however, it does not appear that the Department's policies are uniformly or rigorously applied throughout the state. According to MDT staff, relatively unrestricted commercial parcel access to principal arterial routes contributes to increased congestion, and creates safety concerns as well. On the minor arterials, both residential and commercial access contribute to reduced safety and increased congestion. The level of congestion associated with a given volume of traffic is higher, because of the additional "friction" generated by conflicting movements as vehicles enter or depart the arterial at an uncontrolled access point.

- **Lack of consistency in application of access management standards**

There is a lack of consistent application of uniform standards across MDT's Districts which appears to be a problem. Further, Department staff report that it has been politically difficult to enforce access controls unless there is a clear safety problem which is directly addressed by the proposed control. Denial of access, or conditioning of access, is difficult if the principal benefits are preservation of capacity and functionality.

The specific techniques used to provide adequate access, while preserving capacity and function, need to be suited to the State of Montana, and to the different needs and characteristics of urban and rural areas. For example, frontage roads in rural areas present a maintenance burden to the locality and/or the state, and may be out of character. Different techniques for access consolidation may be required in rural areas, and these need to be considered at the time of subdivision, not later.

- **The current access management approach provides limited tools for preserving corridors**

The state's current access management plan is not consistent with ISTEA terminology or guidelines. The current plan does not address new public

streets, rather it deals with existing public streets and new or existing private driveways. The current plan does not provide specific criteria or a system classification specifically for access management. These were proposed in drafts of the 1992 plan but did not appear in the adopted version.

- **Growing local interest in land use planning**

Parts of Western Montana have experienced rapid growth in the past few years. This growth is geographically concentrated in a small number of counties. Growth rates are most pronounced in the counties that are adjacent to Montana's major urban areas. For example, between 1990 and 1992 population grew in rural Flathead county by 6.6 percent, in rural Missoula County by 5.9 percent, in rural Gallatin County by 8.1 percent, and in rural Yellowstone County by 5.5 percent. The results of the population forecasting conducted as part of the statewide planning indicate that Montana can expect to see a continuation of these trends.

This population growth has been accommodated by residential development in the form of new subdivisions or the permitting of new development on larger parcels of land. New development has resulted in highly visible changes in land use, especially in the highly scenic rural areas, this has generated citizen interest in land use planning and concern about some of the negative impacts of growth.

In general, it is the growth outside of the urban areas which is most visible and gives rise to the greatest concern. This is because growth in these areas results in the most visible and pronounced patterns of land use change. Put simply, it involves development of new housing at densities of between one unit to ten or fifteen acres or the development of new subdivisions at higher densities. There is concern that parts of Montana are now experiencing a cycle of development and associated land use change similar to that which has been experienced in many other areas of the West. This cycle involves new residential development adjacent to established urban areas, which then creates the market for development to accommodate retail and other service activities. Of particular concern is the tendency for this type of development to result in sprawl characterized by low density residential and commercial development.

Typically it is not the responsibility of a transportation agency to address land use planning and development. In fact, the authority to address development patterns lies at the local level. However, the consequences of this type of development affect the demand for transportation.

- **Weak land use planning adversely impacts the transportation system**

Today in Montana, travel or transportation demand is generated by land use. Travel occurs where land uses are separated by distance. The amount and purpose of the travel are related to the use of the land. Different types of land use generate different traffic rates; for example, conversion of agricultural land to residential or commercial development increases the demand for transportation. Commercial activities generate more trips than residential activities. The cumulative affects of land use change affect the level of service of the existing transportation system.

Transportation investment decisions made to maintain existing levels of service that address these travel demands can in turn have impacts on land use. Addition of capacity, or the construction of a bypass, increases the "highest and best use" of land that was previously less accessible. This increases the market demand for highway oriented development. When access to outlying areas is improved, development pressure in the surrounding area is increased. Where there is economic growth, there is a direct relationship between improved highway access and development pressure.

This type of development places significant impacts on the transportation system. The best locations for new residential and especially commercial development are those which have access onto the arterial system. Without access management policies these market trends can severely reduce the function of the arterial system.

- **Lack of corridor planning or management will affect transportation system performance**

Currently the lack of multi-county planning in Montana makes preservation of the integrity of a corridor difficult. More generally, the limited scope of land use planning and regulation impedes efforts to coordinate development with infrastructure improvements or management practices. Cities and counties allow land development to occur at a rate that is too rapid relative to transportation system improvements, creating additional access demands, and foreclosing future options for roadway improvements.

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- **Land use patterns affect the attractiveness of different transportation modes**

Montana's existing, and future land use patterns, affect transportation demand and influence the relative attractiveness of different modes. Travel demands that result from low density residential development and subdivision development in outlying areas tend to be most readily met by the automobile. Montana's new development will likely result in higher rates of single occupancy vehicle trip making, and vehicle miles traveled, than is currently experienced in the urban areas. For example, in 1990 just under 8 percent of the population in Montana walked to work. There is little evidence to indicate that new development will increase or maintain this rate.

Should Montana's communities wish to encourage the use of non-single occupancy vehicles and other modes, the effectiveness of any strategies would be enhanced through land use planning. Nationally, many states and local jurisdictions are attempting to affect the demand for transportation and improve the attractiveness of non-single occupancy vehicles modes as part of their land use planning. This is usually achieved through zoning policy which aims to concentrate commercial development in certain locations and restrict the sprawl of low density residential development. In all cases (with the exception of Hawaii) the primary implementing mechanism is through zoning and the development permitting process which involves authority vested in local units of government.

The state and the Montana Department of Transportation (MDT) has an interest in jurisdictions undertaking land use planning as a mechanism for influencing the location and nature of transportation demand. However, land use planning is, and will likely always be, the preserve of these other units of government.

- **Paying for the costs of growth**

In Montana's fast growing areas one of the most consistent and largest challenges that will face local jurisdictions, and the MDT is paying for the new infrastructure required to maintain efficient levels of transportation service.

As part of the review of development permits, local jurisdictions and the MDT currently have the authority to require developers to fund stop lights or turning lanes and build and pave streets. There is direct authority through the granting of access permits. However, as discussed under

access management, MDT has not consistently used available access permitting authority to help defray the transportation costs of growth.

The absence of land use planning and access management increases the cost of meeting transportation demands. Successful land use planning can reduce the costs of transportation by resulting in development patterns that can affect growth in vehicle miles travelled and improve the prospects for transportation system management. This is an important issue because financing the transportation needs that arise from population growth will be extremely difficult in Montana's growing communities.

- **Limited capacity at the local level to undertake land use planning**

A fundamental transportation issue relating to land use confronting Montana is that there is little land use planning in place with which to coordinate transportation planning. This lack of land use planning adversely affects the ability of state and local transportation systems to anticipate and plan for new travel demands. Local units of government, cities and counties have the authority to undertake zoning and regulate development. However, these jurisdictions have limited resources and technical knowledge with which to undertake land use planning.

- **Need to involve other jurisdictions in addressing access management**

It is crucial to involve metropolitan planning organizations, counties, cities and other jurisdictions in any comprehensive attempt to manage access to the system of principal and minor arterials, as these jurisdictions make the land decisions that give rise to the problem.

It is important to balance land use objectives of communities with the State's mission of preserving the integrity and safety of the highway system. The Department's past experience with lack of political support for an access management program appears to underscore the importance of striving for some reasonable balance, as opposed to simply preserving flow on the roadways.

- **Importance of demonstrating the benefits of access management**

Successful access management strategies will enable Montana to increase the use of existing infrastructure without adding capacity. This is an attractive proposition and the benefits of access management need to be communicated to local jurisdictions and the business community.

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Once an area has begun to develop, it becomes increasingly difficult to remedy the problems associated with unmanaged access. It is relatively more easy to prevent problems through proactive, judicious allocation and management of access to the highway system through the planning process.

The economic impacts of access management can be quantified and evaluated. Decisions should not be based solely on the apparent loss of land taxes and business revenues, but on a balanced evaluation of the tradeoffs including assessment of roadway construction, right-of-way, and maintenance costs. Experience in other western states illustrates that there are considerable benefits to be gained from a strong access management program.

Travel by public transit, walking, and bicycling may become more attractive through access management, not by penalizing the automobile, but by reducing the number and severity of conflict points between motor vehicles and these other modes.

It is advisable to develop an approach that links implementation of access management regulations and techniques to specified measures and criteria, and one that recognizes different facility functions, regional differences, and other specifics of a situation.

III. POLICY GOALS AND ACTIONS

This section outlines policy goals and actions for access management and coordinating land use planning and transportation.

A. Access Management

Access management is considered as an important component of the overall transportation management effort, in support of the system management and preservation theme of ISTEA. Considerable net benefits will derive from consistent application of a comprehensive access management plan. The following policy goals and actions deal with access management, ranging from maintenance of the status quo to pursuit of a comprehensive access management plan that is coordinated with other ongoing efforts in data collection, forecasting, transportation systems management, and congestion management.

1. **POLICY GOAL A: Improve corridor level access management to preserve the highway system.**

This policy will involve modifying the current Access Management Plan to provide more clear guidance to MDT staff on implementation, and emphasize sharing of responsibility with responsible jurisdictions. The primary purpose of this policy to maintain the functional integrity and safety of the state highway system through access management and corridor preservation. The actions adopted to implement this policy will be coordinated with existing ongoing programs including data collection, demand forecasting, and congestion management.

Action A.1. Establish a classification scheme for access management, that defines the appropriate level of access and access control for different classes of state roadway according to functional classification, existing level of access, and surrounding land use.

A separate classification scheme for access management applications is recommended. The functional classification system used for other planning and engineering purposes is not well-suited to an access management strategy. This is because the access management classification needs to take into account the existing level and character of surrounding land use, the degree of access that has already been granted, and other factors. An access management classification system will certainly be related or "nested" with the existing functional classification system.

Level of Effort:

Initial Year 1: 1,600 staff hours to develop and secure support for system

Annually: To be determined, could involve one full time employee

Timing: Initiate in 1995

Action A.2. Inventory, refine the methods, and ensure that there is adequate authority to manage access in Montana.

As a complement to the access classification scheme, MDT will develop a list of approved technical methods for managing access to highways. An attempt will be made to distinguish between those methods appropriate for different classes or facilities, urban versus rural areas, and in areas with differing levels of existing access and land development. The action

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will include identifying additional authority required, and sponsoring if necessary legislation, to provide the tools for corridor preservation.

Level of Effort:

Initial Year 1: 800 staff hours

Annually: To be determined

Timing: Initiate in 1995 complete in 1996

Action A.3. Work to communicate the performance benefits arising from an access management policy.

This action addresses the inevitable resistance that will meet a more aggressive access management program. Developers, merchants, and others in the business community who may fear access management need to be educated about the longer-term advantages of managed access, and the realistic implications of a continuation of relatively unrestrained access.

Level of Effort:

Initial Year 1: Include in existing public information activities

Annually: To be determined

Timing: Initiate in 1995

2. POLICY GOAL B: Establish and fund a level of travel demand forecasting that will support an access management program.

A desirable, though not necessarily essential, component of a comprehensive access management program is a demand forecasting system with the sensitivity to allow evaluation of alternative strategies. For example, network-based models with the ability to simulate the capacity impacts of additional roadside development and access can be used to more clearly establish the trade-off between more aggressive access control and capacity expansion. These tools can be used to demonstrate, where the conditions warrant, that maintaining the function of a highway through access management may be more cost effective than widening, even after taking economic or other impacts into consideration.

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Action B.1. Use the state travel Highway Information System, the TranPlan 21 travel forecasting method, and the Congestion Management System to anticipate areas and facilities in need of access management actions.

This level of effort applies existing tools at minimal additional costs. The level of accuracy is not sufficient to establish project-specific trade-offs, however.

Level of Effort:

Initial Year 1: Minimal, could be undertaken as part of congestion management system work

Annually: Minimal

Timing: Initiate in 1995

Action B.2. Encourage improvement of the condition of travel demand forecasting at the metropolitan planning organization level to better anticipate and identify problem areas, and to link access management policies to local land use policies.

A more demanding level of effort will allow the MDT and metropolitan planning organizations to specifically test the impacts upon capacity of additional development and access to the state system. Implementation would require dedication of additional MDT staff time to the forecasting process, including technical support and coordination for the local jurisdictions.

Level of Effort: To be determined

B. Land Use Planning and Transportation

- 1. POLICY GOAL A: Encourage responsible jurisdictions to establish land use planning and development permitting mechanisms to manage transportation demand by building their planning capacity.**

This policy goal recognizes the MDT's leadership role through working with interested jurisdictions to increase their capacity to undertake land

use planning. The aim is to encourage these jurisdictions to undertake land use planning that can aid transportation system management, demand management, and reduce infrastructure costs.

Action A.1. Work with local jurisdictions to establish and implement a consistent approach for including land use and access management strategies in urban area and metropolitan planning organization plans receiving state funding.

This action involves defining an agreed approach for addressing land use and access management as part of metropolitan planning organization and urban area transportation planning. The approach will ensure that transportation planning is coordinated with, and supports, land use objectives established in existing local land use plans. This action will assist these planning activities and establishes a consistent approach.

Implementation of this action will involve preparing guidelines, in consultation with affected local jurisdictions, that specify how metropolitan planning organization and urban area plans will coordinate with land use planning.

Level of Effort:

Initial Year 1: 400 staff hours to work with affected metropolitan planning organizations and urban areas to develop an agreed approach.

Annually: Monitoring and oversight will be undertaken as part of the existing activities performed by the urban planning section.

Timing: Propose legislation in 1997.

Action A.2. Work with the metropolitan planning organizations and urban areas to develop consistent land use driven travel demand forecasting capability.

Currently the MDT's Urban Planning Section supports travel demand modelling for the three metropolitan planning organization planning areas and Helena, Butte, Bozeman and Kalispell. For many of the planning areas the land use inventories are incomplete and do not reflect recent land

use changes. This affects the ability to coordinate transportation decisions with land use change.

Level of Effort: To be determined

Action A.3 Participate in a working group of the Department of Commerce and representatives of affected jurisdictions to develop and propose legislative recommendations for the 55th Legislature.

This action involves the MDT proposing a multiagency and multijurisdictional working group to develop legislative recommendations for land use planning. The group will include representatives of the Montana Association of Counties and the League of Cities and Towns.

Level of Effort:

Initial Year 1: 800 staff hours to develop legislative recommendations.

Timing: Initiate in 1996.

Action A.4. Consistently apply existing development review authority to ensure that new development contributes to the cost of resulting transportation system improvements.

Currently the MDT and local jurisdictions have the authority to review sub-division development proposals prior to permitting. This action will establish a consistent set of approval guidelines to be addressed in approved development for major traffic generators and facilities. These requirements will use existing authority. To implement the action it will be necessary to develop draft guidelines in consultation with MDT districts, local jurisdictions, and the development community.

Level of Effort:

Initial Year 1: 480 hours of staff time to develop approval guidelines.

Annually: To be determined.

Timing: Initiate in 1995.

Action A.5 Encourage the Department of Administration, the Long Range Building Committee, and state agencies to consider transportation demands when locating new capital facilities and leasing new property.

This action will encourage the Department of Administration to ensure that state agencies, universities, and colleges coordinate the location and design of new facilities with local land use planning to better manage transportation demands that arise from these work sites.

Level of Effort:

Initial Year 1: 240 staff hours to prepare technical memorandum outlining coordination steps.

Timing: Initiate in 1995.

2. POLICY GOAL B: As part of the development review process provide authority to enable local jurisdictions and MDT to require developer contributions to improvements that accommodate new traffic demands.

This goal will involve establishing statutory authority for local jurisdictions and possibly the MDT to levy traffic impact fees for improvements adjacent to new development.

Action B.1. Establish a defensible mechanism for determining the costs of transportation improvements to be paid by the developer.

This policy provides a mechanism for helping to ensure that transportation system improvements are able to keep pace with growth. The mechanism will involve local jurisdictions and the MDT, for highways on the state systems, determining the impact on the link or segment of roadway next to proposed development. The mechanism will involve the following steps: identifying existing traffic volumes on the segment of roadway and then estimating the traffic volume to be generated by the new development. The link capacity is then calculated using the level of service standard adopted by the local jurisdiction or the state. The current link capacity is then compared to the traffic volume arising from the proposed development. If traffic growth can not be accommodated at the accepted level of service then developer improvements will be required to correct the deficiency.

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Level of Effort:

Initial Year 1: Staff time to develop authorizing legislation.

Annual: Minimal. MDT may wish to review the effectiveness of the funding mechanism over the next 5 to 10 years.

Timing: Establish mechanism in 1995.

IV. POLICY GOALS AND ACTIONS NOT ADOPTED

POLICY GOAL: Retain the existing Access Management Plan, and focus on more consistent application of current policy at the District and Commission levels.

Reason: *The current approach to access management is inconsistent and weak.*

Weak access management is adversely impacting highway system performance.

Action. Define or clarify as necessary the reporting requirements from districts to headquarters on all issues relating to access management.

Reason: *The action is not necessary.*

This action should help eliminate some of the present inconsistency between Department policy and District implementation. While it could be acceptable for different Districts to maintain and apply distinct criteria, the coordination of implementation criteria and decisions with Department policy should not vary. Implementation of this action would require clarifying directives to the District engineers.

Level of Effort:

Initial Year 1: 480 staff hours

Annually: Incorporate as part of current activities

Timing: Initiate in 1995

Action. Based on the access management classification scheme identify those areas and corridors within the State that require rapid action and pursue a "jump start" program to address them.

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Reason: Priority corridors will be addressed as part of selected policy action.

This action is aimed at high growth areas where relatively rapid response will prevent further significant deterioration in highway capacity from occurring. The rate of growth in some parts of Montana may justify such action to prevent serious loss of highway capacity during the period in which a comprehensive access management plan is drafted, adopted, and implemented. The jump start program does not amount to a moratorium on new growth. Rather, it could be implemented in the form of a special study area in which department review of any new encroachment or access requests is subject to review and interim rulings, pending finalization of emerging policy or standards.

Level of Effort:

Initial Year 1: Between 1,000 and 1,500 hours in each priority corridor

Annually: 1996 to 1997

Timing: Initiate in 1995

POLICY GOAL: Develop and implement a comprehensive access management plan for the State.

Reason: A careful deliberate approach is required to access management, the policy goals and actions selected will over time move Montana towards this option.

This more aggressive goal would establish a program within the MDT with the primary purpose of maintaining the functional integrity and safety of the state highway system through comprehensive access management and corridor preservation. The actions of this program would be coordinated with existing ongoing programs including data collection, demand forecasting, and congestion management.

Action. Develop and implement performance objectives for the state system that establish acceptable function of the arterial system.

Reason: This action is not required throughout the state.

These actions will allow the MDT to evaluate and consider access management strategies on more equal footing with capacity increases or other capital intensive projects. These actions can and should be coordinated with those developed for other ISTE management systems, in particular the Congestion Management System, which establishes measures of transportation system performance and desirable standards to be maintained.

Level of Effort:

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Initial Year 1: 480 staff hours

Annually: Incorporate as part of congestion management system work

Timing: Initiate in 1995

Action. Establish a multi-jurisdictional task force charged with developing and coordinating access management strategies between the state and metropolitan planning organizations, counties, and cities.

Reason: *Local jurisdictions will be involved in implementing the selected actions.*

This action provides a more proactive approach to involving local jurisdictions in the process of establishing and implementing effective access management policies at the level where they are perhaps most needed. The effort could be coordinated and piggybacked with the MDT's existing involvement in the planning done by urban areas and metropolitan planning organizations. The MDT could require that urban area plans specifically address access management.

Level of Effort:

Initial Year 1: 540 staff hours

Annually: Incorporate as part of existing planning

Timing: Initiate in 1995

Action. Support, and coordinate with, the development of federal guidelines for access management as part of an overall systems management approach to transportation.

Reason: *This is not a high priority for addressing current access management problems.*

Emergent federal guidelines for access management are likely to provide the State with additional resolve if desired. The MDT will assign staff to monitor the development of such guidelines and keep apprised of developments in technical, legal, and policy areas.

Level of Effort:

Initial Year 1: 80 hours

Annually: Incorporate into any access management program

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Timing: Initiate in 1995

Action. Pursue the necessary rule making authority to allow the MDT to implement access management criteria for highways under the maintenance jurisdiction of the MDT.

Reason: The need for new authority needs to be determined first.

As necessary, this action will involve new legislation to provide the MDT authority to establish statutory criteria that define when, where, and how access to state facilities should be limited.

Level of Effort:

Initial Year 1: 480 staff hours

Annually: To be determined

Timing: Potentially seek authority in the next legislative session

POLICY GOAL: Preserve the right-of-way necessary to ensure that access to state routes and principal arterials can be provided in the future.

Reason: This goal is already established in the roadway system policy paper.

In conjunction with modified access management policy, the MDT should review and develop coordinated policies for preservation of right of way. This is important with respect to both preserving additional width around existing corridors for future access needs and new right of way for future extension of transportation corridors.

Action. Use the statewide plan, Highway Information System data base and/or Congestion Management System to identify corridors likely to require expansion or reconfiguration for access management purposes.

Reason: This goal is already established in the roadway system policy paper.

The current and emerging tools available to the MDT should be applied to identify those state facilities that may need improvement or extension in the future. Comparisons of owned, available, and needed right of way can be facilitated with these data bases and decision-support systems.

Level of Effort:

Initial Year 1: 160 staff hours

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Annually: Minimal, incorporate in congestion management system work

Timing: 1995

Action. Review and identify the right-of-way preservation techniques for which the MDT has legal authority and jurisdiction.

Reason: *The need for this action will be determined through the actions selected.*

The State's ability to obtain land for future facility needs without compensation is of course limited. Current statutory or other authority for right of way preservation needs to be reviewed and clearly established for MDT use in the development of a corridor management strategy.

Level of Effort:

Initial Year 1: 600 staff hours

Annually: To be determined

Timing: Initiate in 1995

POLICY GOAL: Undertake no new initiatives and encourage local jurisdictions to address land use related issues on a case by case basis.

Reason: *The lack of local land use planning adversely impacts the transportation system.*

This goal reflects a continuation of the current situation in which MDT has not established a policy position of encouraging local jurisdictions to coordinate their land use planning with transportation. This goal will address ISTEA planning requirements through coordination with existing land use plans, where they exist.

The goal involves taking no new policy action with respect to land use issues. While all authority for land use planning rests at the local level, the absence of land use planning can impact the performance of Montana's transportation system. The actions for addressing access management and corridor management discussed earlier can all provide the basis for addressing the land use factors required by ISTEA for statewide transportation planning.

Action. Establish and fund a technical assistance grant program for local jurisdictions to undertake land use planning to better manage transportation demand.

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Reason: The MDT does not have a responsibility for funding land use planning

This action provides funding for technical assistance for local jurisdictions to undertake transportation-related land use planning. Minimum requirements will need to be established that specify the scope of the land use planning that will be supported. The focus should be on land use planning strategies to help manage transportation demands. The requirements will include the specific plan elements and the implementing mechanisms which would be included. Grant recipients must agree to address the minimum planning requirements. The MDT could develop the minimum plan requirements in collaboration with the Department of Commerce, and local jurisdictions.

The minimum requirements will address land use strategies that can better manage transportation demand and be specifically linked to corridor development and preservation. These strategies include: employment concentration, locating residential areas close to employment sites, site design and mixed use development. The planning will also involve the implementation of land use strategies through local actions. These actions will include zoning ordinances and development permitting.

POLICY GOAL: Recommend legislation that supports land use planning in the counties experiencing fast population growth.

Reason: The MDT is not the appropriate state agency for recommending legislative action regarding land use planning.

This goal involves the statewide planning process recommending that the Legislature support land use planning in the fast growing communities. The goal acknowledges that weak land use planning affects the management of the transportation system but that land use planning is not, and can not be the responsibility of a transportation agency.

Action D.1 Propose legislation to support land use planning for interested jurisdictions. This alternative will involve recommending legislative funding for land use planning. It will not require jurisdictions to plan but will assist those jurisdictions wanting to plan. To be effective it will involve establishing minimum requirements for planning. The MDT will agree to fund the transportation element of land use plans provided that certain minimum requirements are met.

Level of Effort:

Initial Year 1: 600 MDT staff hours to develop minimum requirements.
 800 hours other agencies.

Annual: MDT \$200,000 a year for five years to fund transportation elements.

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State appropriation to designated lead agency (most logically Department of Commerce) \$1,000,000 in the biennium.

Timing: Establish planning requirements in 1995.
Initiate funding fall 1995.

Action. Propose legislation for the 54th Legislature requiring jurisdictions in the fastest growing counties (currently this includes Flathead County, Missoula County, and Gallatin County) to prepare land use plans to minimize urban sprawl and reduce the costs of infrastructure provision. The proposed legislation will outline minimum planning requirements legislation and include provision for a working group comprising the Department of Commerce, the MDT, and affected local jurisdictions to provide guidelines that specify acceptable minimum planning requirements. Proposed legislation could also include the provision for other slower growing counties to choose to prepare plans to meet the minimum requirements.

This option involves establishing a statutory requirement for land use planning. Like other western states, historically Montana has been reluctant to influence land use through planning. Restricting the requirement to the fast growing counties will avoid mandating planning in jurisdictions where there is no real or perceived problems for planning to address.

Any proposed legislation will need to include funding to assist the jurisdictions to implement planning. It would be unrealistic and politically infeasible to place new requirements on local jurisdictions that are not funded. Therefore, the legislation will need to be accompanied by an appropriation to support land use planning. In support of any legislative proposals the MDT could agree to contribute to funding the transportation elements of required plans.

Reason: The MDT is not the appropriate state agency for recommending legislative action regarding land use planning.

Level of Effort:

Initial Year 1: 480 hours staff time to develop agreed minimum requirements

Annually: 480 hours staff time to manage and participate in local planning.

\$300,000 program funding per year for 5 years to support land use planning. This assumes that there will be an interest on the part of local jurisdictions. It is likely that there will be the greatest interest in the fast growing counties. Issues to be addressed in managing the program include, whether to require a local funding match and

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how many planning efforts to support each year. This level of funding assumes that planning is supported in two or three jurisdictions per year over a five year period depending upon local match. At this point MDT could undertake a review of the program to evaluate success and then determine whether to continue.

Timing:

Establish minimum guidelines, solicit participants in 1995.
Fund planning starting in 1996.

V. REFERENCES

Land Use Planning and Regulation for Local Governments, 1994. Montana Department of Commerce, Community Technical Assistance Program.

Scenic Byways Feasibility Study, 1994, Montana Department of Transportation.

Montana Department of Transportation

TranPlan 21



PUBLIC TRANSPORTATION IN MONTANA

Policy Paper

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POLICY PAPER**I. PUBLIC TRANSPORTATION IN MONTANA - BACKGROUND**

This policy paper identifies potential policy goals and actions for public transportation in Montana. As background, the role that public transportation currently plays in Montana's transportation system and the trends in the provision and use of public transportation in Montana are described. The key issues relating to the future role of public transportation in Montana's transportation system and policy goals and options for addressing them are outlined.

A. Key Characteristics of Public Transportation in Montana

Public transportation is addressed in this paper (and by TranPlan 21) in its broadest sense, to include all the passenger transportation options available, other than driving alone. This includes urban and rural transit, demand responsive transit for the elderly and disabled, passenger rail, intercity bus, commercial scheduled air service, and car and van pooling. These components of Montana's current public transportation system have been examined as part of the TranPlan 21 technical work.

Public transportation services are provided by the private sector, not-for-profit organizations, and different public agencies. In recent years Montana has experienced changes in the organization and provision of public transportation. In general there has been a steady continued reduction in the public transportation services available and in the use of these services. The decrease in service has been most pronounced for intercity travel. In 1979, Amtrak ended service across the southern part of the state and intercity bus services have steadily declined. This trend continues, in the short time period during which the plan has been prepared, a number of intercity bus providers have stopped operating and there is a strong possibility that Greyhound Lines Inc., will pull out of Montana in 1995. Amtrak has also announced plans to reduce service from seven to four days a week.

The following summarizes the key features of Montana's public transportation system:

Intercity Bus. Intercity bus companies provide service to and between Montana's major urban areas, despite a severe decline in intercity bus service in Montana over the past decade. Recently, Intermountain Bus Lines ceased business and there is a very strong possibility that Greyhound Lines, Inc., will soon cease service in Montana. Rimrock has taken over some of the former Intermountain Bus Lines routes.

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Urban Transit Systems. There are urban transit systems in Missoula, Great Falls, and Billings. These systems are used mainly by the transit dependent. Overall ridership is low and journey-to-work trips account for between a quarter and a third of all passengers. In Billings the Census reported that 1.2 percent of work trips were by bus, in Missoula 1.5 percent, and in Great Falls 1.0 percent in 1990. Overall ridership has been falling, in 1994 the urban transit systems carried just under 1.6 million passengers. Between 1990 and 1994 ridership in Billings fell by 25 percent and in Great Falls by 5 percent although ridership has increased in Billings since late 1994.

The information available from urban area plans and transit development plans indicate that Montana's urban transit systems and automobiles serve entirely different markets in Montana today. Transit mainly provides mobility options for those without cars because they can not afford them, are too young, are physically not able to drive, or do not have a driver's license.

Rural Transit Systems. Rural areas and cities under 50,000 population depend upon small urban and rural transit systems in addition to transportation provided through a variety of health and human service organizations. There are nine rural public transportation systems in Montana. Two of these, Butte and Kalispell, are fixed route. These are funded under Section 5311 of the Federal Transit Act (formerly Section 18). These systems are operated by local nonprofit organizations or local government and provide demand-responsive services. In 1994 the rural transit systems carried 280,065 passengers, a decrease of some 32,719 since 1990.

Public Transportation for the Elderly and the Disabled. Operators that provide services for the elderly and disabled are eligible for federal funding for capital expenses from section 5310 of the Federal Transit Act (formerly Section 16). Historically, Montana has had an active successful program and received the first Section 5310 vehicles in the United States. There are now more than 75 recipients of Section 5310 funding across the state. In 1994 over 110,000 rides were provided to elderly and disabled passengers, a figure that has been increasing in recent years.

Passenger Rail. Passenger rail service in Montana is provided by Amtrak, the National Railroad Passenger Corporation, which is a federally subsidized nonprofit corporation. Amtrak currently operates across the northern portion of the state, providing daily eastbound and westbound service to 12 stations in Montana. Only a minority of the state's population has access to Amtrak services, 23 percent of the population lives in a county with an Amtrak station, or in a neighboring county. In the ten years from 1984 through 1993 Amtrak ridership increased in Montana by 14 percent. Ridership has risen markedly at Whitefish, East Glacier Park, Essex, and Belton-West Glacier stations. This is due to

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increased use of rail to access summer and winter tourist destinations and the growth in population in these areas. Stations further east at Havre, Malta, Glasgow, and Wolf Point have experienced a decrease in boardings and deboardings. In December of 1994 Amtrak announced plans to reduce service from daily to four days a week.

Commercial Scheduled Air Service. Despite the state's sparse population, Montanans have good access to air transportation. Almost all Montanans are within a one county distance of an airport with scheduled commercial service. Air transportation services are usually provided by the private sector in response to market demand. Air transportation services to eight Montana airports: Glasgow, Glendive, Havre, Lewistown, Miles City, Sidney, West Yellowstone, and Wolf Point are subsidized by the federal government's Essential Air Service program. There is some uncertainty over the future of this program and the criteria affecting the subsidy.

Recent trends in enplanements and service provision indicate that Montana will be adversely impacted by restructuring in the airline industry. In recent years overall growth in enplanements has been low and there have been withdrawals by major carriers from the Montana market.

B. Key Challenges For Public Transportation in Montana

Montana shares with the Nation an overwhelming reliance on the private automobile for mobility, however, the state faces unique challenges to public transportation. Montana lacks the compact, dense population and development patterns that traditional forms of public transportation can most efficiently and effectively serve. Instead, the state is characterized by low population densities, widespread and scattered facilities and development, few, if any parking problems, no severe congestion, and short journey-to-work times.

The following describes the major challenges for public transportation in Montana:

1. Dominant Use of the Private Automobile

The people of Montana overwhelmingly choose the private automobile for their mobility needs. This preference is growing, reinforced by increasing rates of automobile ownership, land use patterns, low energy prices, and more drivers making multi-destination trips. Most Montanans only think of transportation in terms of the highway and their car.

The trends in the availability and nature of public transportation have been shaped by this ever greater reliance on the private automobile which has

reduced demand for public transportation and facilitated growth and development patterns that are difficult to service efficiently by public transportation. Montana now has one of the highest rates of automobile ownership in the Nation. Currently, there is a low use of public transportation in Montana. In 1990 just under 1800 people used public transportation each day for their journey-to-work. In many communities and rural areas the only mode of transportation available is the private automobile.

2. Low Population Densities

Montana has low population densities and relatively small communities. This results in a small market for public transportation. Although parts of Western Montana will experience rapid growth over the next twenty years, the fastest growth will occur in rural areas adjacent to the larger cities. These trends are likely to result in a continuation of low density settlement patterns that are difficult to serve by public transportation.

Low population density results in travel demands in Montana that are not conducive to the traditional forms of public transportation such as buses, light rail, or subways. These forms of mass transit require large populations traveling along heavily used corridors through densely developed, compact areas with large employment sites. This dense form of travel involves a many-to-one travel pattern, with people traveling from many locations to one or a few sites of employment. Montana does not have such conditions. The opposite is true, Montana has few large concentrations of employment with few work sites housing over 200 employees. Most journey-to-work travel in the state is done on a many-to-many basis, with many people traveling to many dispersed locations or employment sites. In addition, it should be noted that journey-to-work trips represent a decreasing proportion of travel demand and the faster growing non-work trips are typically more difficult to serve by transit because they have scattered destinations and not concentrated in peak hours.

3. Declining Ridership and Segmentation of the Public Transportation Market

Public transportation use in Montana is declining. There has been a decline in ridership of urban transit, decline in intercity transit, and an increase in ridership of specialized services. If these trends continue, public transportation in Montana will be targeted increasingly to particular groups or market segments with schoolchildren riding school buses twice

a day, senior citizens and the disabled riding the social service van, and the remaining transit dependent segments, usually low income and those with no other travel alternatives, riding transit, where available.

4. Relative Attractiveness of the Automobile

The cost of travel, travel time, convenience, comfort, and safety are all factors affecting the relative attractiveness of different modes. In Montana the trends associated with these tend to be in favor of automobile travel, rather than public transportation.

Accounting for inflation, the cost of owning and operating an automobile increased only slightly by about 3.7 percent between 1985 and 1992 (American Automobile Association, "Your Driving Costs," 1993 edition). During this time the cost of gasoline and oil fell by 4.1 percent. Driving is the most affordable cost effective means of transportation for the majority of Montanans. In the harder to quantify areas of convenience, comfort, and overall journey time (from door to door) it is difficult for public transportation to compete with the low cost and convenience of the automobile.

5. Land Use and Development Patterns

Butte, Billings, Helena, and many of Montana's other urban areas are much older and consequently were developed as more compact communities than newer cities in the West. Their earlier type of land use and development allows easy access by pedestrians and service by public transportation. Public transportation and pedestrian traffic go hand in hand because public transportation users, once their journey is over, must be able to easily complete their trip to their final destination on foot.

Montana's current development patterns, in both rural and urban areas, consist of dispersed growth that can only be accessed easily by car. Services and employment sites are no longer within walking distance of each other, so that several car trips are necessary to complete life-sustaining activities. New development is oriented to the automobile, with large set backs from the road, surrounded by parking lots, and lacking easy access by pedestrians and by public transportation. Much of this development competes with the older central business district as a trip destination, further reducing the market for public transportation.

6. Funding

Funding for urban and rural transit comes mainly from the federal government, local sources, and users. There is very limited direct state funding. Restricted funding levels place constraints upon the level of service provided and the existence of service in many communities. Current public transportation funding provides services to segments of the population in specific areas, at specific times, with extremely limited evening and weekend service. As a result, people who are dependent on public transportation have difficulty in leading the highly mobile lifestyle typical of most of their friends and neighbors. Employment is more difficult because work schedules and transportation schedules must coordinate.

7. Independent Behavior

The people of Montana value their independence and take pride in their Western spirit of self-reliance, resourcefulness, and equanimity under difficult conditions. In common with most Americans, the people of Montana perceive that driving their own cars when and where they want is a right, not a privilege. Governmental mandates that would force people not to use their cars would not progress farther than the pre-planning stage, particularly when traffic congestion, development densities, and the inconvenience of using one's own car - all factors which influence people to leave their cars at home - are relatively insignificant. Most Montanans have short journeys to work and no parking problems, which limits the benefits to them from using public transportation. However, this independence and self-reliance could be the basis for the development by the people of Montana of innovative, attractive public transportation services that would best meet their needs.

8. New Retirees and Aging Population

In common with the rest of the country, Montana is experiencing changes in the composition of its general population and its work force. Areas of Montana are attracting retirees and as a whole the population of the state is aging. Senior citizens who move to Montana are active and have every intention of driving as long as they can. When they are no longer able to drive safely, the provision of services to a dispersed population of senior citizens will be difficult. In previous generations, senior citizens who could no longer drive depended on their families for transportation. This network is usually not available today.

C. Importance of Public Transportation to Montana

The importance of public transportation to the state's residents is probably best understood by the people and their families and friends who lack other modes of mobility. In a country dominated by the car, to live without a car is unthinkable, except in the most densely populated urban areas. In the past, a car was not so necessary to the maintenance of life because of family networks, functioning central business districts, fewer numbers of senior citizens, less consolidation of facilities (such as medical) and closer community ties. Today people and services are remote and access is not easy. Public transportation can fill the gap between people and life-sustaining activities.

As the earlier analysis showed, there is little competition between the car and public transportation today in Montana. Therefore, public transportation is most important to that segment of the population without access to a car. It performs a social role providing basic mobility for many Montanans.

The following highlights the current and future importance of public transportation in Montana:

1. Mobility for the Elderly and Disabled

Public transportation systems are particularly important for the elderly and disabled; two population groups that are growing in size in the state. Systems serving these groups are usually small, designed specifically for the needs of their target group of users, and are not available to the general public. They serve the elderly and disabled well and allow people to maintain their independence and remain in their own homes, without being forced to enter an institution.

These specialized systems provide services:

- On a local city, town, or county intraservice area basis (i.e. travel to grocery store and other life supporting activities).
- On a regional interservice area basis (i.e. travel to regional medical center).

2. Access to Social Service

Public transportation plays an important role in linking social services and the people who need them. Often these people have no other means of reaching the services they need. Lacking transportation, they cannot help themselves become independent and self-supporting. The elderly, the disabled, low income people, and children at risk fall into this category. Social services accessed by public transportation are senior centers, nutrition sites, sheltered workshops, adjustment training centers, and others. Public transportation allows people to meet social service goals such as independence and productive community membership.

3. Basic Mobility for Montana's Residents

A minimum level of intercity services, urban, and rural transit provide a key role in ensuring the connectivity of Montana's rural areas, smaller cities, and large urban centers. Even with low levels of service, this is essential for maintaining rural communities. In urban areas it provides a basic mobility option for residents without cars and those temporarily without access to one.

4. A Tool for Managing Future Traffic Growth and Congestion and Improving Air Quality

In Montana today, transit serves an entirely different market than the automobile. Its success cannot be measured in terms of congestion alleviated or reduced vehicle miles travelled. However, as parts of Montana continue to grow rapidly, public transportation could play an important role in meeting some of the new travel demands. In Missoula transit plays a role in improving air quality.

II. PUBLIC TRANSPORTATION ISSUES

A. Issues Raised By Citizens and Industry Representatives

Citizens and industry representatives identified a number of issues concerning the current and future roles of public transportation in Montana. The issues are described in detail in the TranPlan 21 - Issue Identification Results report. The overall sentiment is one that supports, in principle, the availability of a public

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transportation system in Montana and a belief that such a system is important for social, mobility, and environmental reasons.

The general issues identified were as follows:

- **Desire for a multimodal transportation system.** This sentiment is strongest in the urban areas of the state. While there is recognition that the automobile will continue to be the most important means of transportation, there is strong feeling that it is time to start providing alternatives where it is feasible.
- **Recognition of the social role of public transportation.** There is widespread recognition that the needs of the transit dependent will increase in the future and strong feeling that a basic minimal level of transportation service should be provided where feasible.
- **Need to promote public transportation.** The availability and benefits of public transportation are not known to most Montanans and existing services that are under utilized should be promoted.
- **Desire to provide transit-friendly infrastructure.** In Montana's large urban areas there is strong interest in meeting future transportation demand through increased transit use. Land use and design guidelines that facilitate transit use are considered important for success. However, there is strong skepticism about the cost-effectiveness of existing fixed route systems for moving people.
- **Concern about the conditions of terminals, the lack of intermodal passenger facilities and connections.** The poor condition of terminals and facilities adversely affects the image of public transportation. This concern was most acute for intercity passenger terminals.
- **Concern about lack of coordination between systems.** There is concern about the lack of coordination between existing urban, rural, and intercity systems.

B. Issues Arising From Existing Conditions and Trends

The following public transportation issues arise from the evaluation of recent trends, existing conditions, and practices as part of the TranPlan 21 technical work.

- **Need to establish policy goals defining the MDT's role in public transportation.**

The state's current involvement in public transportation is through the administration of federal funding programs. The MDT's involvement is restricted to urban and rural transit systems and elderly and disabled transportation. In this capacity, MDT is helping to ensure minimum levels of mobility in rural areas and statewide for the elderly and disabled. A key issue for the MDT is whether existing programs should be expanded beyond the federal funding allocation.

The state currently has no role in intercity bus, passenger rail, or urban transit. The intercity bus industry provides the only means of intercity and intrastate travel for a segment of Montanans and it continues to decline. Intercity bus services are provided by private sector firms. There are a range of potential actions open to state government for ensuring a minimum level of service. They would all involve establishing working relationships with the private sector. A key issue for the MDT is whether there should be a state role in intercity bus provision or facilitating the use of bus and passenger rail.

The extent and rationale for any state role in funding transit must be carefully considered. The federal and state role in highway funding is tied to the concept of functional classification. The higher the function, the higher the priority. In this way local roads and streets do not receive federal and state funds. These are funded locally. By this logic, where public transportation serves a statewide or regional function there is a clear "state interest." This would indicate state interest in intercity and regional service providers.

There is, however, a state interest in having a certain minimum level of urban and rural transit to serve as a "mobility safety net" for Montanans and in the future in providing a strategy for preventing or reducing congestion.

- **Public Transportation Is Not Well Understood**

Public transportation is not well understood and its benefits are not as easy for the public to identify as the benefits of a highway widening project or the construction of a parking garage. No exact dollar amount can be placed on the ability of everyone being able to sustain their lives and move about independently. Public transportation is a complex issue

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because the community must reach a consensus that mobility for everyone is an idea worth supporting in a concrete and sustained fashion.

- **Need to Recognize the Constraints Upon Transit in Montana**

The TranPlan 21 issue identification effort documented a strong public interest in public transportation and transportation demand management activities such as carpools, vanpools, or telecommuting as a strategy for meeting travel demand and protecting the environment, especially air quality. However, there is little technical evidence to suggest it is realistic to plan on meeting any but a small portion of Montana's future automobile travel demands through public transportation.

Population growth will itself create new demands for public transportation. As Montana's population and large urban areas continue to grow public transportation will have a role to play in meeting new travel demand but it will not remove the need for an efficient urban highway system. The opportunities for increasing the role of public transportation in meeting future travel demands will be greatest in urban areas and along the most highly traveled highway corridors.

Public transportation may offer opportunities for preserving air quality in Montana's larger urban areas, however, public transportation can only play a role in protecting air quality if it is used. It is important to bear in mind that older diesel buses are heavy emitters of pollutants.

- **Need to identify opportunities for public transportation that will work in Montana**

Urban transit does not serve Montana's travel patterns well. When it attempts to do so, the resulting poor performance is used as evidence that public transportation is a waste of money and should be abolished. For example, in 1993 both the Great Falls and the Billings transit systems carried less than one passenger for each service mile. Rather than focusing on traditional forms of public transportation, the people of Montana should encourage more innovative uses of bus systems and identify opportunities for other forms of public transportation, such as vanpools or carpools.

There is interest in applying transportation demand management techniques to Montana such as carpooling, van pooling, and telecommuting that are being used elsewhere. It is not immediately evident how successful they would be in Montana. Where moderately successful nationally, these programs are targeted to the work trip in some of the densest and largest travel markets in the country. There is little evidence to suggest that such measures would have much impact on travel demand in Montana's urban areas. However, there may be individual niches that can be filled by van pools.

- **Importance of ensuring support for existing publicly funded transit**

For a sparsely populated large state, Montana has an extensive network of rural, elderly, and disabled transportation service providers. However, there is no consensus of public opinion that public transportation is a necessary component of a community's infrastructure, in the same category as water and light, sewers, trash disposal, and streets and highways. At the same time, taxpayers are disenchanted with entitlements and "rights" and are reluctant to pay more for the public good. In this environment it is important to build community consensus and support for public transportation.

- **Accommodation of public transportation on the highways**

It is important to remember that public transportation in Montana uses the highway system or, in the case of rail and air, depends upon the highways for access. Therefore it is important to address public transportation needs as part of the project development process. This is most important in urban areas and selected corridors.

- **Continued decline in intercity bus industry**

The continued decline in intercity bus service in Montana means that for a majority of communities there are no intercity travel options other than a car. Currently, 28 percent of Montanans live in counties not served by intercity bus. The service levels may decrease further if Greyhound Lines, Inc., ceases to operate in Montana. For people without a car, limited resources, and no family on which to rely, intercity travel is impossible in many parts of the state.

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It is not feasible for existing providers, which comprise of small specialized transportation systems, to meet intercity travel needs. Budget constraints, no available vehicles except for local service, and regulations that prevent intercity travel offer no avenues, except car or ambulance, through which, for example, a senior citizen can get to the regional medical center located two hundred miles away.

- **Lack of performance goals and standards for public transportation**

Partly because public transportation is not well understood, lacks consensus, and has changing roles, standards of performance for levels of service are not applied to the different systems in Montana. Without standards and performance measures, comparisons between systems and measurement of service levels are impossible. In the absence of this information it is difficult to allocate funding in the most effective manner and to identify where local systems can benefit from managerial assistance. The MDT is implementing a public transportation management system that will provide performance measures such as passengers per mile, cost per mile, and others that can provide improved information for public transportation.

- **Need for improved coordination and cooperation between providers**

Coordination of services can bring more service to users and more efficient use of resources. Cooperation between public transit needs and private transportation systems inevitably leads to issues about regulations. Often these state and federal regulations prevent coordination of services. For example, senior citizen transportation services cannot provide rides for clients of the adjustment training center and certainly no one rides a school bus except children involved in school related activities.

Coordination and information sharing about transportation activities and transit services for specific segments of a community are lacking, and transit providers have difficulty in sharing resources such as vehicles, staff, maintenance, and funds.

III. POLICY GOALS AND ACTIONS

This section outlines adopted policy goals and actions for the MDT's role in public transportation.

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A. POLICY GOAL A: Promote and support increased use of public transportation systems.

Action A.1. Support local promotional/educational programs to publicize public transportation opportunities.

This action involves supporting local efforts to publicize the availability of public transportation and encourage its use. A major emphasis in the program will be on changing people's attitudes about public transportation and then their actions. Potential riders will have to be educated on how to use the available services and reassured as to the service's safety, reliability, and convenience. Promotional activities should communicate "what's in it for me" to the potential rider in the most specific terms.

Level of Effort:

Initial Year 1: 240 MDT staff hours to prepare materials and implement the program.

Annually: 480 MDT staff hours

Timing: Initiate in 1996

Action A.2. Ensure highway improvements address public transportation needs.

This action involves consideration of transit infrastructure needs as part of advance project planning and design. Inclusion of public transportation in the initial stages of urban highway improvement projects allows public transportation to function as an integral part of the area's transportation network and reduces the need for expensive and disruptive retrofits of the street and highway network. Appropriate bus pullouts, sidewalks, and park and ride lots are easier to build as part of a highway project, rather than being added later. The recommendation is applicable to fixed route systems. In urban areas fixed route transit system needs should be included in metropolitan planning organization's and urban area long range plans.

Level of Effort:

Initial Year 1: 1000 MDT staff hours

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Annually: 1000 MDT staff hours

Timing: Initiate in Fall 1996

Action A.3. Provide state-level funding support for transit by providing a fixed amount of funding for rural transit systems "off the top" of Surface Transportation Program funds, and transfer urban highway funds to transit at the request of metropolitan planning organizations.

This action uses Surface Transportation Program to provide a mechanism for making flexible funding available to rural transit systems. The transit providers will be required to meet the required match for capital funds and be able to meet operating costs. To meet the match providers will require local funding or state support.

Action A.4. Coordinate state planning, urban area and transit system development planning and management.

There is already a good level of coordination. This action will help further ensure the coordination between planning and management of the highway and transit systems. This will be achieved by increasing transit agency participation in urban area planning, either through participation on policy committees or more involvement in technical committees. In turn, there will be state interest in the transit development planning undertaken by the transit systems. These transit plans should offer mechanisms for evaluating the applicability of transportation demand management and innovative service provision initiatives in Montana's urban areas. In addition, transit development plans should identify any associated highway improvements necessary for enhancing transit.

Level of Effort:

Initial Year 1: 500 MDT staff hours

Annually: 500 MDT staff hours

Timing: Initiate in Fall 1995

Action A.5. Establish minimum transit service goals in cooperation with local agencies.

A public transportation management system is being developed that will provide information on the performance of transit systems in Montana. This action will

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develop minimum service goals against which performance and transit needs should be measured.

Level of Effort:

Initial Year 1: 480 MDT staff hours to develop level of service goals

Timing: Initiate in 1995

B. POLICY GOAL B: Preserve existing intercity public transportation service and encourage/facilitate the development of new services.

Action B.1. Work with the intercity bus industry to identify the most effective state-level actions for preserving existing service.

The continued decline in Montana's private intercity bus industry is the result of both national restructuring in the industry as well as decreasing ridership and increasing costs. This action involves working with the providers to identify the most effective actions open to state government to preserve the existing service. The MDT has already commissioned a study to identify potential elements of state level intercity program.

Level of Effort:

Initial Year 1: 320 staff hours

Annually: To be determined by intercity study

Timing: Undertake study in 1995 and implement recommendations immediately.

Action B.2. Evaluate the costs and feasibility of funding new intercity service in unserved areas.

Many areas of the state have no intercity bus service to major urban areas. This is especially true for large areas of central and northeastern Montana. This action will evaluate the costs and feasibility of state intervention to fund the provision of service. There are a variety of mechanisms that should be involved. These range from contracting with existing providers (public or private) to run twice weekly services to major urban areas to purchasing vans for intercity service. This action will evaluate the costs and potential funding mechanisms.

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Level of Effort:

Initial Year 1: 480 staff hours for feasibility study

Annually: To be determined by study

Timing: Undertake study in 1995 and implement recommendations immediately.

Action B.3. Fund the implementation of a "rural ridesharing" demonstration program.

This action involves evaluating the potential for meeting some of Montana's intercity transportation needs through a rural ride sharing program. This could help meet mobility needs and serve as a rural ridesharing program. Nationally most ride sharing has been developed as a congestion management strategy. This action will involve evaluating the success of the ridesharing program in rural areas. It will require either hiring a ride share coordinator or contracting with a local provider to implement the demonstration program.

Level of Effort:

Initial Year 1: 480 MDT staff hours

Annually: Three year demonstration at \$50,000 per year.

Timing: Initiate in 1996

Action B.4. Work to improve publicly owned intermodal passenger facilities.

This action will involve considering funding for improving passenger rail and intercity bus facilities. Many of the state's rail and bus stations are in poor condition. Improvements can make the use of public transportation more attractive and increase its patronage. The action will require working with Amtrak, airports, and intercity bus providers.

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Level of Effort:

Initial Year 1: 200 MDT staff hours to establish funding criteria.

Annually: Dependent upon projects funded.

Timing: Initiate in 1995

Action B.5. Coordinate with Amtrak to facilitate increased use of rail and preservation of existing service levels.

This action involves establishing a working relationship with Amtrak to identify state actions that may increase the use of Amtrak and preserve existing levels of service. There has been a decrease in passengers using stations in eastern Montana and this action will try to ensure that service is retained at these stations.

Level of Effort:

Initial Year 1: 400 MDT staff hours

Annually: 400 MDT staff hours.

Action B.6. Evaluate intermodal passenger connections using existing bus, train, or airline terminals.

This action involves identifying opportunities to improve existing facilities for shared use by more than one mode and service provider. This could include the coordination of schedules and ticketing procedures, and integrated baggage handling facilities for ease of interline and multimodal use.

Level of Effort:

Initial Year 1: 600 staff hours to assess feasibility

Annually: To be determined

Timing: Initiate assessment in 1996
Implement in 1997

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Action B.7. Ensure that Montana's interests in expanded passenger rail service are addressed in any national decision making concerning increased Amtrak service.

This action involves tracking national initiatives to increase passenger rail and ensuring that Montana's interest in east-west service across the southern tier of the state is addressed.

Level of Effort:

Initial Year 1: 80 staff hours

Annually: 60 staff hours

Timing: Initiate in 1995

C. POLICY GOAL C: Work to improve service to social service passengers and the transportation disadvantaged - the elderly, children at risk, low income, and the disabled - through interagency coordination.

Action C.1. Improve state agencies and local provider cooperation in funding coordination.

This action will involve all state agencies reporting expenditures on passenger transportation. The action may involve legislation that requires all agencies to report this expenditure. The MDT could then use this information to identify opportunities for coordinating social service passenger transportation programs.

Level of Effort:

Initial Year 1: 200 MDT staff hours to identify impediments to coordination.

Annually: 200 MDT staff hours annually.

Timing: Initiate in 1996

Action C.2. Establish a statewide coordinating council to increase flexibility in budgets and budgeting processes so that transportation providers can more easily access and coordinate available funds.

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Various state, local, and non-profit social service organizations provide transportation services beyond those funded through the MDT's administration of federal grants. There is only a limited amount of coordination between these agencies. This is because many of the agencies do not consider themselves to be in the business of delivering transportation services. This action provides a mechanism for improving this coordination and avoiding the duplication of funding and overlapping functions. This could result in the increased utilization of existing equipment, improve service, and make for a more effective use of public dollars.

Level of Effort:

Initial Year 1: 200 MDT staff hours to prepare proposal

Annually: Quarterly meetings
160 MDT staff hours
800 staff hours other agencies

Timing: Initiate in 1996

Action C.3. Work with the Public Service Commission to facilitate easier entry into passenger service provision (especially Medicaid transportation).

This action will identify opportunities for reducing regulations, without jeopardizing safety and reliability, and streamline procedures for entry into service provision.

Level of Effort:

Initial Year 1: 200 MDT staff hours

Annually: 40 MDT staff hours

Timing: Initiate in 1995

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D. POLICY GOAL D: Identify and implement transportation demand management actions that will work in Montana.

Action D.1. Encourage metropolitan planning organizations and urban areas to evaluate demand-side strategies in their plans.

This action supports existing planning efforts and will encourage Montana's urban areas to work with the transit systems to identify and consider demand-side strategies applicable in Montana as part of their urban area planning. This could include measures to reduce the number and length of individual trips that people make. Among the strategies to include are promotion of ride share programs, telecommuting, and compressed work weeks.

Level of Effort:

Initial Year 1: 320 MDT staff hours

Annually: 200 MDT staff hours

Timing: Initiate in 1995

Action D.2. Work with other state agencies to develop a transportation demand management program for state government.

This action involves developing a transportation demand management program for state government. The MDT will take a leadership role by determining the most effective potential approaches for state employees and then implementing these over the decade. State government is the largest employer in Helena and has many single large employment sites that are more conducive to transportation demand management. The transportation demand management program will be incorporated as an element of any updates to the Helena urban area plan. The program should be long range in perspective and involve incremental implementation. If participation is low and trip reduction minimal the program should be terminated.

Level of Effort:

Initial Year 1: 640 MDT staff hours to prepare program

Annually: To be identified in the program

Timing: Initiate in 1997

IV. POLICY GOALS AND ACTIONS NOT ADOPTED

Action. Allow transit projects to compete with highway improvement projects on the "primary system."

Reason: *Flexible funding for urban and rural transit is best addressed by the selected actions.*

This action will provide a mechanism in future years for implementing congestion management strategies such as funding van pool acquisition or small buses and developing intermodal facilities. The action will require a local match.

Level of Effort:

Initial Year 1: 480 Staff hours to develop any legislative changes required and/or criteria for evaluating eligible transit projects.

Annually: Minimal staff effort. Project evaluation will be incorporated into the MDT's programming and project selection processes.

Timing: Initiate in 1995

Montana Department of Transportation

TranPlan 21



Bicycle and Pedestrian Transportation

Policy Paper

prepared by

DYE MANAGEMENT GROUP, INC.

in conjunction with

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I. BACKGROUND - BICYCLE AND PEDESTRIAN TRANSPORTATION IN MONTANA

A. Bicycle and Pedestrian Modes in Montana

Analysis of bicycle use usually distinguishes between the use of bicycles for work related trips and errands as opposed to use for recreational purposes.

1. Bicycles as a Mode Choice In Montana

There is little information on the demand for and the use of bicycles in Montana for anything other than journey to work trips. The primary source of data from which to draw conclusions about bicycle ridership is the journey-to-work data collected for the 1990 Census. These data are summarized in Exhibit A, for the state as a whole, and in Exhibit B for selected cities. These data reveal that in 1990:

- Just under one percent of all journey-to-work trips were by bike.
- Overall bicycle use for journey-to-work trips is low in urban areas and especially low in Great Falls, Billings, and Butte.
- Missoula and Bozeman have the greatest concentration of bicycle use.
- In 1990, eight percent of all journeys to work were pedestrian trips.

Although bicycle ridership in Montana is low, based on Census data, the rate of bicycle use for journey to work trips in Montana is twice the national average.

There are no data available about the use of bicycles as a mode choice for other types of trips.

2. Walking as a Mode of Travel in Montana

Walking is an element in almost every trip. Just under eight percent of Montanans walk to work every day, which is almost twice the national average. The median journey time for people walking or cycling to work in 1990 was just under eight minutes. Journey-to-work is the only

systematic data available concerning walking. However, it does not include the use of pedestrian facilities by those under 16 and walking for errands and other activities. One reason for the importance of pedestrian trips in Montana is that the states' urban areas are relatively old. They were built as towns with much greater density than today's development patterns. Walking is a traditional form of transportation in small towns across Montana.

3. Recreational Use in Montana

There is no systematic information available about recreational bicycle use. However, there are a number of active local bicycle clubs that organize fun rides and other events. The types of information that help plan for bicycle needs include: periodicity which is how frequently recreational rides take place, the characteristics of the riders including whether they are families, and the length of recreational trips.

The Missoula based Adventure Cycling organization has established some nationally noted cross country routes. Routes through western Montana include:

- Highway 37 Libby to Eureka.
- Highway 93 Eureka to Kalispell.
- Highway 40 Whitefish to Columbia Falls.
- Highway 2 Kalispell to East Glacier.
- Highway 35 East shore of Flathead Lake.
- Highway 83 Bigfork to Clearwater Junction.

Exhibit A
Montana Statewide
Means of Transportation,
Journey to Work in 1990

(Age 16 and Over)

Journey to Work	Total	Percent
Drove Alone	249,820	71.8
Car Pool	41,171	11.8
Walked	26,780	7.7
Worked at Home	21,876	6.3
Bicycle	3,203	0.9
Other Means	2,416	0.7
Bus	1,762	0.5
Motorcycle	709	0.2
Taxicab	195	0.1
Total	347,932	100.0

Source: U.S. Department of Commerce, Bureau of the Census.

Exhibit B

Bicycle and Pedestrian Journey to Work in Selected Montana Cities

(Age 16 and Over)

City	Bicycle		Walked	
	Number	Percent ¹	Number	Percent
Missoula	793	3.9	1,638	8.2
Bozeman	453	4.1	1,858	16.9
Great Falls	199	0.3	1,173	4.8
Helena	178	1.5	1,276	10.5
Billings	172	0.4	1,779	4.8
Kalispell	94	1.9	381	7.5
Butte	37	0.3	866	6.4
Total	1,926	1.5	8,971	7.2
Statewide Total	3,209	0.9	27,022	7.7

¹Percent of total journey-to-work trips in city

Source: U.S. Department of Commerce, Bureau of the Census.

B. National Trends

Over the past decade there has been an increased national interest in the ownership and use of bicycles.

The national bicycling and walking study conducted by the Federal Highway Administration found that by the end of 1993, there were more than 100 million bicyclists in the United States, which represents an increase of over 33 percent in the last 10 years. More than half of the United States' cyclists are adults. Ownership of bicycles is increasing. In 1993, 13 million bicycles were sold in the United States, the highest level in 10 years. In a recent Harris Poll survey half of America's adult bicyclists said they would commute to work or school at least occasionally if there were safe places to ride. (National Bicycling and Walking Study. Federal Highway Administration, 1991). The same survey showed that nearly 60 percent of all Americans want the government to devote

more funds to making the transportation system more bicycle and pedestrian friendly. Bicycle advocates argue that the potential for shifting trips from driving alone to bicycling or walking is significant. This is because 25 percent of trips are one mile or less, 40 percent are two miles or less, 66 percent are 5 miles or less.

C. Changing Policy Environment

1. Federal Policies

In recent years federal policy has placed increased emphasis on the provision of bicycle and pedestrian facilities as part of the transportation system. In 1990, the U.S. Department of Transportation stated that it is national policy to: "Promote increased use of bicycling, and encourage planners and engineers to accommodate bicycle and pedestrian needs in designing transportation facilities or urban and suburban areas" (National Bicycling and Walking Study. Federal Highway Administration, 1991).

The Intermodal Surface Transportation Efficiency Act (ISTEA) requires that the incorporation of bikeways and pedestrian facilities into highway projects are considered as one of the 23 statewide planning factors. ISTEA requires both the Montana Department of Transportation (MDT) and the state's metropolitan planning organizations to include bicycle and pedestrian elements in their transportation plans.

More recent policy statements by Congress, the U.S. Department of Transportation and the Federal Highway Administration state that "the federal policy goal for bicycling (specifically) is to accommodate current use and to encourage increased use, while enhancing safety."

2. State Requirements

The 1985 Footpath and Bicycle Act (Montana Code Annotated 60-3-301) is the only Montana statute identified that specifically addresses bicycle use and pedestrians. This act sets a minimum annual spending requirement for footpaths and bicycle trails. The MDT has met this requirement by documenting the costs of paved shoulders, sidewalks, and road and bridge improvements that benefit pedestrians and bicyclists.

D. Status of Bicycle and Pedestrian Facility Planning and Development in Montana

The MDT has responded to an increased public interest in bicycles and new federal mandates by implementing a range of bicycle and pedestrian projects and establishing a state-level program. Montana's metropolitan planning organizations, urban areas, and the tribal governments in the state are undertaking planning and project development to address bicycle and pedestrian needs. Current efforts are discussed below.

1. State-level Bicycle and Pedestrian Planning

The status of the major elements of the MDT's bicycle program are summarized below.

- **Bicycle and pedestrian coordinator**

The MDT has established a state bicycle and pedestrian coordinator, as required under ISTEA. The coordinator is responsible for addressing non-motorized transportation considerations. This position is currently a half time position and the responsibility of one person located in the urban planning section. The current coordinator responds to specific requests for assistance, provides technical assistance (in the areas of justification, agreements and design standards) to state and local governmental agencies and other divisions and bureaus within the MDT, and serves on the State Trails Committee. The coordinator also works with the MDT's Engineering Division. The Coordinator is currently involved in developing a process to ensure that pedestrian and bicycle concerns are consistently addressed in the project development process.

Many communities have financed bicycle and pedestrian facilities. This has resulted in many technical assistance requests to the state coordinator. Coordinating the use of Congestion Management and Air Quality Improvement funds allocated to Missoula and used for bicycle and pedestrian improvement is also the state coordinator's responsibility.

- **Consideration in advance planning and design**

Bicycle and pedestrian facilities are considered in the project development and review process. However, this consideration

would benefit from policy direction that would provide guidance to District engineers and design engineers for addressing bicycle and pedestrian facilities consistently.

- **Bicycle and pedestrian facilities are receiving funding**

Montana is currently in the third year of administering the Community Transportation Enhancement Program. This provides the mechanism for allocating \$5.5 million enhancement program. Over one half of the approved enhancement projects submitted by local units of government include facilities for bicycles and pedestrians, despite the requirement for a higher percentage of local matching funds. In Missoula, Congestion Management and Air Quality funds have been used for several bicycle and pedestrian projects. These include improvements to the bridge structure at California Street that provides a critical link for trail accessibility across the river. In addition, a number of current urban area projects have included bicycle and pedestrian improvements.

All three Montana metropolitan planning organizations have or are currently completing non-motorized transportation plans. Bicycles are included in transportation plans for several smaller Montana urban areas including Flathead and Cascade Counties.

The availability of federal policy direction and funds for planning and construction of pedestrian and bicycle facilities enhancement resulted in requests from local government, the public, and special interest groups for inclusion of these facilities on many state road and highway projects. Public interest is impacting all phases of roadway planning and design. The following lists the issues raised by the public concerning bicycle facilities and some of the technical planning issues.

2. Tribal Governments and Local Jurisdictions

- **Tribal governments are planning for non-motorized modes**

A number of the tribal governments are actively involved in planning for bicycle and pedestrian facilities. This is a particular concern on the reservations for both safety and mobility reasons; for many, bicycles and walking offer an affordable means of transportation.

II. KEY BICYCLE AND PEDESTRIAN POLICY ISSUES

A. Public Interest in Bicycle and Pedestrian Facilities in Montana

Public involvement undertaken as part of TranPlan 21 and recent experience during project development steps, such as environmental impact analysis around the state, reveal a strong public interest in the provision of bicycle and pedestrian facilities. Among the key issues are the following:

- The stated need and citizen priorities for bicycle and pedestrian facilities for commuting, transportation, recreation, and the preservation of environmental quality.
- A desire for increasing and improving bicycle and pedestrian facilities and safety, most notably in urban areas.
- The need to recognize the geographic and climatic constraints in Montana and the limited role for bicycle facilities in rural areas.
- The importance of avoiding system discontinuity, distinguishing between urban, rural, and regional differences in Montana.
- Skepticism about the extent of the role bicycles can play as a mobility solution in Montana.

B. Planning for Bicycles and Pedestrians in Montana

The considerable public interest in bicycle and pedestrian facilities, expressed through public involvement processes around the state, raises a number of planning issues. Simply put, these issues concern how to address bicycle needs in a very large sparsely populated rural state that experiences long cold winters. Further, in addressing bicycle needs, it is important to determine the role that bicycles and pedestrian facilities can play as part of Montana's overall multimodal transportation system.

1. Bicycling and Walking as Modal Options in Montana

Bicycling and walking is undertaken to some degree by almost all Montanans. Bicycling is used as a mode of transportation by a small proportion of Montana's population. However, walking is used by a large number, many people walk to work, to stores, and schools. Viewed from a twenty year planning perspective, bicycling and especially walking can provide alternative means of transportation and have the potential to help to reduce roadway congestion and air pollution.

Efforts to promote bicycle and pedestrian mobility in Montana appear best suited to both Montana's larger and smaller urban areas. Bicycle and pedestrian components of urban area plans can include steps to sustain and increase the use of these modes. In the larger urban areas walking and cycling can support local congestion management plans and contribute to improving the state's air quality.

Bicycle and pedestrian mobility serves mainly recreational purposes in rural areas. Extensive planning and programming appears unnecessary, given the state's vast geographic scope and low rural population densities. Efforts to improve rural facilities would be best suited to localized recreational attractions where they would be more cost-effective.

2. Planning Issues

- **Need to target resources to where demand is and not overbuild**

The available data indicate large differences in the use of bicycles between different cities in Montana. For example, bicycle use in Missoula and Bozeman is much greater than Billings and Butte (note Exhibit B). Similarly, there are likely to be large regional variations in interest and demand for bicycle facilities. Any approach to targeting bicycle resources should recognize Montana's different urban, rural, and regional demands.

- **Accommodating bicycles and pedestrians on the highway**

Bicycle and pedestrian facilities are most readily accommodated in the roadway right of way. Therefore, their planning, development, and maintenance is most readily incorporated into road planning and design processes. The key planning question is the level of highway development necessary for accommodating bicycles.

- **Designating a bicycle and pedestrian system**

Montana has no officially-designated statewide system of bicycle or pedestrian paths, routes, or trails. Designating a bicycle system is an approach taken in some states to identify preferred facilities for use by bicyclists.

- **Mobility benefits of bicycles and pedestrian facilities**

Bicycling and walking provide travel options for those who are unable or chose not to drive. Depending upon the extent to which bicycling and walking results in a reduction of vehicle miles travelled, or a slower rate of growth, they could contribute to improved environmental quality. In the state's urban areas, increased use of bicycles along with other strategies could help to meet air quality standards, prevent congestion, and help to reduce demands on the highway system. Successful pedestrian and bicycling strategies can provide key elements of a multimodal strategy for ensuring continued high levels of mobility in Montana.

- **Promotion of bicycle and pedestrian use through the provision of facilities**

In many cases local jurisdictions choose to invest in bicycle and pedestrian facilities rather than other modes, not based on the forecast demand for the facilities but based on the goal of providing infrastructure that supports modal alternatives. This approach assumes that by providing enhanced infrastructure there will be facilities in place to promote and encourage the use of bicycles.

- **Bicycle and pedestrian facilities as part of the quality of life**

At the local level, communities are increasingly interested in the development of bicycle paths for recreational purposes. Such bicycle paths are valued more for their contribution to community livability and the overall quality of life than as a mode. Providing safe and convenient pedestrian access is also an important component of many local plans.

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- **Avoiding system discontinuity**

Ensuring system continuity is an important element of state and local bicycle and pedestrian planning. This will require coordination between the state, metropolitan planning organizations, and urban areas to avoid system discontinuity. An example of system discontinuity would be a case where a bridge reconstruction on a classified bicycle route does not address bicycle use.

- **Recognizing the differences in bicycle and pedestrian demands**

Planning for bicycle and pedestrian facilities needs to establish a consistent approach to bicycle and pedestrian facilities based upon recreational or commuting function, current and anticipated demand, and urban and rural location.

III. POLICY GOALS AND ACTIONS

A. POLICY GOAL A: Institutionalize Bicycle and Pedestrian Modes.

Action A.1. Develop the State Bicycle and Pedestrian program with the following elements:

- A coordinator with responsibilities for planning and assisting with implementation. This will include coordination with related state and local government planning efforts.
- A program of training and assistance to staff within the Department to address the needs of non-motorized modes.
- Coordination with related state planning efforts including State Department of Fish Wildlife and Parks, State Lands, and Department of Natural Resources and Conservation.
- Develop a state wide bicycle/pedestrian plan that will implement the related goals and objectives of TranPlan 21.

The coordinator is already undertaking a number of the tasks described above. This action would provide further direction for the development of the bicycle and

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pedestrian program. The extent of technical assistance will depend upon the staffing allocated to the bicycle and pedestrian program. Given the low levels of bicycle use in Montana, the key policy issue is whether additional effort should be made to promote increased use.

MDT currently has a half-time State Bicycle Coordinator in the Urban Planning Section. This action has optional staffing levels. It will now be staffed at the level of one full time employee. Increasing the staffing level will enable the coordinator to: provide additional assistance to local jurisdictions, further promote bicycle use. Increasing the staffing level provides the staff resources to implement other actions described in this policy-paper.

Level of Effort:

Annually: One full time employee

Timing: Initiate in 1995

Action A.2. Work with the Department of Commerce to prepare a bicycle related tourist guide.

This action will involve combining the identification of tourism-related bicycle routes with tourism related economic development. Implementation may be undertaken at the regional level and will be most successful if undertaken in conjunction with the Department of Commerce's tourism development program. The potential of joint funding and obtaining private sector funding, or publishing the routes as part of Montana's regional tourist profiles, should be examined. The growing popularity of recreational bicycling offers a good tourism-related economic development opportunity for Montana.

Level of Effort:

Initial year 1: 160 staff hours to solicit and coordinate Department of Commerce participation

The level of the MDT's funding support for the bicycle guide will depend upon the level of funding by other parties.

Annually: Minimal, periodic minor update of tourist guide.

Action A.3. Assist other units of government to provide transportation facilities that encourage or consider the use by bicyclists and pedestrians.

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Urban areas have limited staff and technical expertise with which to consider bicycle and pedestrian needs. The MDT currently provides assistance to jurisdictions that request assistance. This action will result in a more proactive approach and help these jurisdictions to address their bicycle and pedestrian needs more effectively. Implementing this action will be the responsibility of the bicycle coordinator.

Level of Effort:

By combining community transportation enhancement program and bicycle and pedestrian coordinator responsibilities one full time employee will be available.

Timing: Initiate in 1995

Action A.4. Prepare and disseminate public service announcements addressing bicycle and pedestrian safety.

The MDT and the Office of Public Instruction currently provide bicycle and pedestrian safety information. This action provides the opportunity to increase public awareness about bicycle safety. It will also increase awareness that bicycles are used as a mode of transportation in Montana. The action would involve preparing radio and television "spots" as a new Public Information Office activity. The action should be implemented through the safety management system steering committee in cooperation with the Office of Public Instruction.

It is likely that radio and television announcements developed elsewhere could be adapted for use in Montana.

Level of Effort:

Initial year 1: Radio spots - 200 staff hours to prepare radio spots and work with media

Television spots- 200 staff hours to identify and review applicability of existing materials to Montana. Additional costs will be incurred to tape footage of bicycle and pedestrian safety in Montana.

Annually: Minimal, 80 hours, could be incorporated into ongoing public information activities.

Timing: Verify feasibility in 1995 and initiate

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Action A.5. Encourage the safety management system steering committee to use the safety management system to provide information on bicycle and pedestrian safety.

This action will involve reporting information on bicycle and pedestrian safety to aid in the designation of the bicycle network and evaluation of any safety-related bicycle improvements. The safety management system will identify safety-related bicycle and pedestrian needs for consideration in project development, use by local jurisdictions and other agencies.

Level of Effort:

Initial year 1: 80 staff hours to identify and select bicycle and pedestrian safety measures

Annually: Minimal, incorporate into the ongoing safety management system work.

Timing: 1995 identify measures for inclusion
1996 report safety information from management system

Action A.6. Encourage the Safety Management System steering committee to undertake efforts to educate motorists on safely interacting with bicyclists and pedestrians.

This action recognizes the importance of motor vehicle driver education in promoting safety. However, education in this area is not under the MDT's jurisdiction. The MDT could use the results from the safety management system to provide input on bicycle and pedestrian safety to the Department of Justice.

Level of Effort:

Initial year 1: 80 staff hours to identify information that will help the Department of Justice.

Annually: Minimal, incorporate into the activities of the bicycle and pedestrian coordinator.

Provide bicycle and pedestrian safety information annually as an output from the safety management system.

Timing: Initiate in 1996

POLICY PAPER**B. POLICY GOAL B: Target Bicycle-related and Pedestrian Improvements to Account for Urban, Rural and Regional Differences in Current and Future Use.**

Action B.1. Identify the most significant routes designated through metropolitan planning organization and urban area plans and selected rural "touring routes" with the greatest demand or potential demand as the basis for planning and system improvement decisions.

This action involves identifying a network of bicycle routes for public information, planning, and system improvement purposes. This can provide a basis to ensure that any bicycle related improvements will contribute to the development of an overall system and ensure that the level of development for bicycle facilities reflects anticipated future demand.

The MDT and local jurisdictions in Montana are already addressing bicycle improvements at the planning and project development levels. Identifying a network of bicycle routes will provide the basis for providing a consistent approach to prevent system discontinuity and to ensure that the MDT does not "over design" facilities. Given the level of public interest in the provision of bicycle facilities and the active planning underway at the metropolitan planning organization and urban level, identifying bicycle routes will provide the basis for coordinating planning and improvements on the state system with local priorities.

This action avoids having to designate an entire system. It takes as the starting point the premise that the greatest demand for bicycle facilities and the greatest contribution that bicycles can make to mobility in Montana is in the state's urban areas. The action involves identifying the most significant routes in metropolitan and urban areas. These routes are in the process of being identified by local planning efforts. The action will also undertake a process to identify selected rural "touring routes", that could be promoted as part of the tourism related economic development efforts described in Action A.2. They could also be combined with any scenic byway related activities. Designation of routes will involve the jurisdiction with the appropriate authority providing bicycle-related informational and directional markings.

Level of Effort:

Initial year 1: 600 staff hours to identify rural touring routes and coordinate with metropolitan planning organization and urban area planning.

Annually: Minimal

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Timing: Initiate in 1995, however completion will depend upon the progress of the metropolitan planning organization and urban area plans.

Action B.2. Establish a consistent planning approach and design guidelines for incorporating bicycle and pedestrian facilities into highway improvement projects.

Bicycle needs are considered as part of the current project development process. Many different highway improvements across Montana are now including bicycle facilities. However, their consideration tends to be in the later design stages of a project. Bicycle facilities are often not factored into the preliminary design and cost calculations. Establishing a consistent approach will help avoid system discontinuity by ensuring that the MDT will provide a level of bicycle development that will be used over the next twenty years. This action involves establishing a series of consistent guidelines for approaching bicycle facilities. These guidelines will be tied to any designation or identification of bicycle routes. Further, any guidelines will need to be flexible enough to allow for the wide differences between urban and rural areas in addition to accounting for regional use variations.

Action B.3. In incorporated areas, unincorporated communities, and indian reservations consider further bicycle improvements based upon proven use or expected future use.

This action applies to urban and other areas (excluding the metropolitan planning organization and urban areas addressed by planning) by recognizing that in these areas there may be a need for bicycle facilities beyond accommodation on an existing shoulder. The nature of the facilities will depend on local conditions and demand. However objective criteria are need in order to determine how bicycle facilities should be considered. Developing thresholds based on bicycle use and urban-rural distinctions should avoid the over-design of facilities based upon unconstrained local demands for facilities.

The action anticipates distinguishing between different areas, based upon use and expected use, to avoid over-design. If current design standards for shoulder widths are adopted to meet bicycle needs in rural areas there will be no increase in unit costs.

Level of Effort: To be determined

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Action B.4. Improve bicycle and pedestrian facilities in Montana through incorporation in existing projects

The Intermodal Surface Transportation Efficiency Act has increased the ease of funding bicycle improvements as part of highway improvements and on an individual project basis. This has resulted in increased local and user interest in funding bicycle improvements. However, accommodating bicycles through changes in design increases the unit costs of individual projects. The scale of the unit costs will depend upon the design established for on-street facilities (bicycle lanes, wide curb lanes and shoulders). This action provides options for establishing explicit policy direction for approaching bicycle funding.

Unless there is a safety problem, bicycle improvements will be implemented only where they are part of existing or planned project improvements. For example, any rural principal arterial that did not have a shoulder would not be improved just to address bicycle needs. The bicycle needs would be addressed at the same time as major reconstruction. This action will be most applicable to National Highway System and Surface Transportation Program funds and would not preclude Community Transportation Enhance Program funds or Congestion Management and Air Quality funded projects.

Level of Effort: No departure from current funding levels

Action B.5. Make selected bicycle improvements in urban areas as a congestion management and air quality improvement strategy.

This action recognizes that over the 20 year planning horizon there is some potential for the use of bicycles as part of an overall multimodal strategy for addressing congestion. This is particularly applicable to Billings, Missoula, and Great Falls.

Level of Effort:

Initial year 1: This will depend upon the size of any program. However targeting the use of existing Congestion Management and Air Quality funds to bicycle improvements will provide a good funding mechanism. It should be noted that these can currently only be used in Missoula. However, if Missoula reaches attainment status, Congestion Management and Air Quality funds will revert to the overall Surface Transportation Program.

Annually: Ongoing project funding

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Timing: Initiate in 1996

Action B.6. Adopt and implement consistent bicycle friendly maintenance standards.

This action involves reviewing overall design standards for rumble strips, drive approaches, cross walks, signage, drainage and so forth. A major area of interest raised by bicycle users was the question of rumble strips. It is necessary to ensure better understanding of Montana's new rumble strip policy that allows separation between vehicular traffic and bicyclists.

IV. POLICY ACTIONS NOT ADOPTED

Action. Establish an advisory committee to serve as a liaison between the MDT, other jurisdictions, and bicycle and pedestrian users.

Reason: If there is an advisory committee for one mode, there would need to be one for each other mode.

This action will establish an advisory committee to provide input from bicycle users and facility providers to the MDT. Such a committee would provide direct input to bicycle and pedestrian planning. This could benefit the MDT by engaging transportation users in addressing pedestrian and bicycle-related needs. In turn, bicycle-users and pedestrians would increase their understanding of the MDT's role as manager of the overall state transportation system.

Action. Establish advisory committee to meet twice a year.

Reason: If there is an advisory committee for one mode, there would need to be one for each other mode.

This action will establish an advisory committee that will meet twice a year. The advisory committee could be staffed by the bicycle coordinator. The action suggests limiting meetings to twice a year. Opportunities for reducing the need for face-to-face meetings should be considered. One approach would be to have the committee function as a corresponding committee. This would allow members to review materials and provide any written comments or call in with suggestions. This would increase participation, help to ensure statewide representation, and reduce the number of trips committee members would need to make to Helena.

Level of Effort:

Initial year 1: 200 staff hours to establish advisory committee and fully define its role

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Annually: 200 staff hours to establish advisory committee and fully define its role

Timing: Initiate in 1995

Action. Do not officially designate a bicycle system

Reason: *A state-wide bicycle system needs to be identified.*

Continue with the current situation of no officially designated routes. This action avoids concern about any liability issues that might arise from designating routes. The MDT would simply note that bicycles may be used on all highways except where prohibited. The disadvantage of this is that it limits the information that the MDT can provide to bicyclists requesting route information. The Department does receive requests for route information and with the growing popularity of cycling this could increase.

Action. Inventory routes according to suitable/not suitable for bicycles distinction.

Reason: *Other MDT actions better address the issue of route identification*

This action will involve designating routes according to the suitability of current conditions. Suitability will be based upon current conditions such as the presence of shoulders and other factors such as traffic characteristics. Designation based on suitability will limit liability exposure but this should be carefully considered in determining the suitability criteria. Where these criteria are not met, roadways should not be designated as suitable. Determining suitability criteria and evaluating the suitability of every highway in Montana for bicycle use will be an involved activity, given the large number of center line miles on the state system and the very low bicycle ridership in most of Montana's rural areas. Further, even where designated unsuitable, the road can still be used for bicycles.

Level of Effort:

Initial year 1: 320 staff hours to establish designation criteria and review liability issues
1,000 staff hours to determine suitability

Annually: 160 staff hours to update and disseminate information

Timing: Initiate in 1995

Action. Adopt a more detailed classification system for bicycle routes.

Reason: *Other MDT actions better address the issue of route identification.*

The American Association of State Highway Transportation Officials has developed a classification system for bicycle facilities that includes: bicycle lanes, bicycle paths,

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bicycle routes, bikeways and shared roadways. This action involves applying some type of classification system for bicycle mobility in Montana. This will involve an extensive effort and involve classifying roads rarely used by bicyclists. To successfully develop and apply a classification system will involve a collaborative process involving other state agencies, local jurisdictions, and transportation users.

Level of Effort:

Initial year 1: 400 staff hours to establish classification criteria and review liability issues
1,000 to 1,600 hours to establish classification

Annually: 160 staff hours to update and disseminate information

Timing: Initiate in 1995

Action. Establish minimum design standards for addressing rural bicycle transportation needs on the National Highway System in Montana on principal arterials.

Reason: *Satisfactorily addressed in existing geometric design standards.*

The level of development plan provides for 40 foot width or greater for principal arterials in Montana. This action acknowledges that these widths provide adequate accommodation for bicyclists on the shoulder or a wide curb lane. Assuming that the users' origins and destinations are similar to a motorists this would provide suitable linkages for rural bicycle travel.

Action. Make selected bicycle-related improvements to ensure system continuity.

Reason: *Not considered a priority*

This action will provide policy direction to undertake improvements to secure system continuity beyond those that will be undertaken as part of the overall improvement program. In considering this action, care needs to be taken to tightly define any recommendations to avoid creating the circumstances in which high cost improvements that would receive low use such as major bridge improvements could be undertaken solely for the purposes of accommodating bicycles.

Level of Effort:

Initial year 1: This will be dependent upon the number and size of the projects funded.
This action could be constrained depending upon the suballocation of the program to these types of improvements.

Annually: Ongoing program allocation

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Timing: Timing 1996 onwards. This will have to follow identifying bicycle routes.

Action. Undertake a program of bicycle related improvements to develop the bicycle system including selected off-street paths.

Reason: *Not considered a priority*

This action involves Montana undertaking a program of bicycle related improvements to develop a bicycle system. It could include off-street improvements such as bicycle paths or building bicycle lanes in urban areas. The purpose of such investments will be to make infrastructure improvements as part of a strategy to meet future transportation needs through the provision of bicycle facilities.

Level of Effort:

Initial year 1: This will depend upon the size of the program of improvements. However a meaningful program will require the relatively large allocations of funds for construction.

Annually: Ongoing program funding

Timing: Initiate in 1996

Action. Replace existing rumble strips with bicycle-friendly rumble strips starting in "high use" areas.

Reason: *Existing new rumblestrip policy addresses this. It needs to be better communicated.*

This is an issue consistently raised by bicycle users. Rumble strips make it difficult for bicyclists to be accommodated on the highway shoulder. The safety benefits for motorists of rumble strips need to be balanced with the concerns of bicyclists. Usually, safety related needs are preeminent. Therefore, establishing any revision to rumble strip practices must address safety management issues.

Level of Effort:

Initial year 1: 640 hours to establish and document new rumble strip guidelines.

Annually: Minimal

Timing: Initiate in 1995

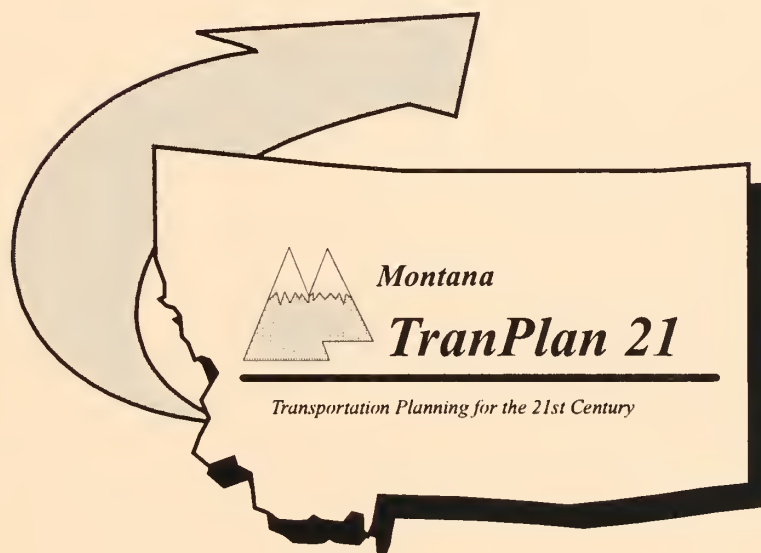
V. REFERENCES

U.S. Department of Transportation, Federal Highway Administration, *National Bicycling and Walking Study, Interim Report*, (Washington, D.C., 1991)

U.S. Department of Transportation, Federal Highway Administration, *Selecting Roadway Design Treatments to Accommodate Bicycles*. (Center for Applied Research: Great Falls, Virginia, 1994).

American Association of State Highway and Transportation Officials (AASHTO), *Guide for the Development of Bicycle Facilities*.

Citizen and Stakeholder Issues and Priorities



Montana Department of Transportation
February, 1995

Prepared by:
Dye Management Group, Inc.

TRANPLAN 21 VOLUME IV

CONTENTS



This volume presents the results of the three major public involvement efforts carried out as part of the TranPlan 21 process. Each of the sections in this volume is intended to serve as a "stand alone" document. Each document provides:

- The approach to gathering the public input presented; and
- The results of the effort.

This volume contains the following documents:

Issue Identification Results

This document presents the results of a detailed issue identification process that involved transportation users, providers, and stakeholders in meetings throughout the state. This initial public involvement effort identified the issues addressed in TranPlan 21 and gave it direction.

Public Comments on Plan Alternatives and Policy Choices

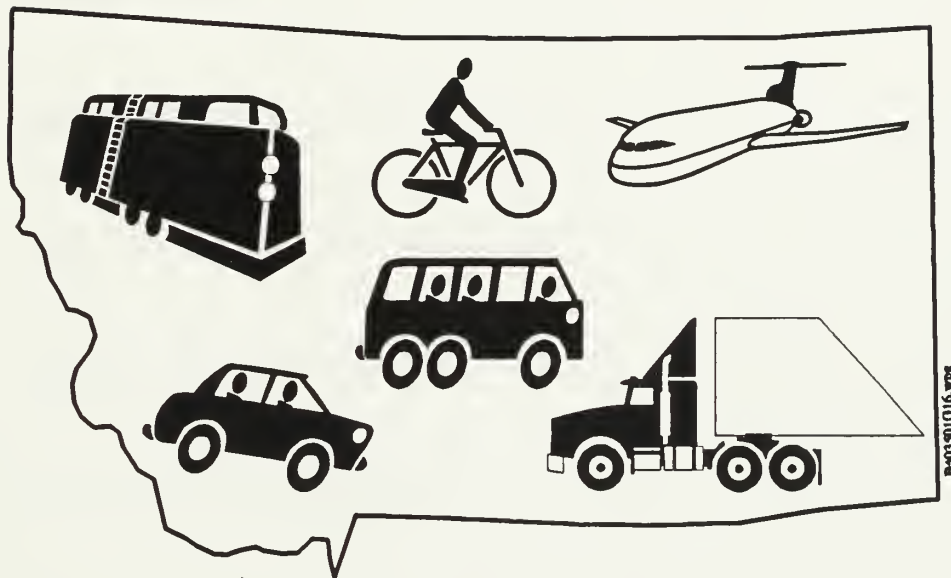
This document describes the plan alternatives and policy choices preferred by citizens and transportation interests in Montana who attended a second series of meetings throughout the state. The purpose of the public involvement effort presented in this document was to continue the dialogue that began with the issue identification process and to involve Montanans in setting priorities for the future of the state's transportation system.

Public Opinion Survey Results

This document provides information on the most pressing transportation concerns and priorities for state action identified by 710 Montanans. MDT conducted the survey to obtain direction from many Montanans who have not traditionally taken advantage of other public involvement opportunities.

Montana Department of Transportation

TranPlan 21



Issue Identification Results

May 1994

prepared by

DYE MANAGEMENT GROUP, INC.

Montana Department of Transportation

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- Appendix C: Written Comment

Executive Summary



The Montana Department of Transportation (MDT) is preparing Montana's first statewide multimodal plan TranPlan 21. As a first step, MDT undertook an extensive effort to involve the citizens, transportation interests, and Tribal Governments in Montana in a dialogue about their preferred future for the State's transportation system. This initial public involvement effort identified important issues and gave direction to TranPlan 21. A total of 259 people signed in as participants in public involvement meetings. Others provided input in writing or by telephone. It included public open houses in Butte, Great Falls, Missoula, Kalispell, Miles City, and Billings. MDT representatives also met with a wide range of transportation interests and providers in the State and representatives from all tribal governments. In addition, the Department received a number of letters and phone calls expressing individual concerns.

The issue identification showed that many Montanans share similar concerns about the current transportation system and a largely common vision for the future. Following are the most important general and modal issues identified by the public input. The concerns expressed in this document reflect those of meeting attendees and do not necessarily represent the views of all Montanans, nor those of the MDT.

A. GENERAL ISSUES

The following provides an overview of the overall concerns and issues that were raised by participants.

- **Desire for a multimodal transportation system.** Participants recognized the importance of moving to a multimodal transportation system. This is true in particular in the urbanized areas of the State. While most participants realized that the automobile will continue to be the most important means of transportation, they also thought that it is time to start providing alternatives where it is feasible and to make provisions that will allow for the use of these alternatives in the future.
- **Desire for a broader role for MDT.** Participants seemed to envision a broader role for MDT than it has had in the past. They felt that a shift from an agency that is mostly concerned with roadway construction activities to one that helps better manage the overall transportation system is needed. There is a recognition that many transportation problems are not local but regional or corridor level, involving a number of local jurisdictions. Therefore, MDT is the only agency able to address

the problems and should have a leadership role. Specific examples that indicate a broader role are: facilitating land use planning at the local and regional level, providing information on public transportation services to both users and providers, supporting local freight needs, and providing design standards conducive to bicycles, and pedestrians and transit for use by local governments.

- **Concern about the overall relationship between transportation and the quality of life.** Many participants asked that MDT make sure that transportation decisions are not made in a vacuum but consider their impact on communities, the quality of life of Montanans, the economy, and the environment. They called for MDT to protect the scenic beauty of the State's major travel corridors, the character of its towns and cities, wildlife, and sensitive areas.
- **Importance of safe transportation facilities.** The safety of highway users, bicyclists and pedestrians is a very important issue for a large majority of participants. MDT should continue to make safety a priority for all transportation users.
- **Recognition of the need for coordinated land use and transportation planning.** Generally, participants at the open houses were conscious of the close relationship between land use and transportation. There is a recognition that MDT affects land use decisions by providing transportation facilities and through access controls to these facilities. Roles suggested for the State include: supporting the efforts of local governments through the provision of appropriate facilities and access controls, providing information to local governments, and coordinating efforts for land use planning on a regional basis.

B. ISSUES BY MODE

Participants raised a number of issues with regard to the different modes of transportation. They are listed below.

1. Highways

- The system is basically complete - with a few exceptions, therefore the focus should be on preservation and maintenance. Most participants at the public meetings felt that Montana has an excellent highway system given its size, population density, and resources. They thought the highway system in the State is basically complete and that MDT should focus on preservation and maintenance.

There was agreement, however, that specific components of the system need capacity improvements. Highway 93 between Kalispell and Missoula, for example, was mentioned at most meetings. The need to pave the gravel road between Terry and Brockway was raised in Miles City. There was discussion of improvements between Great Falls and Billings in both locations but no consensus on the need. Most open houses identified problem intersections or connections within particular urban areas.

- **Need for access management.** Many participants realized the need for better access management and control on major facilities in certain corridors. They cautioned, however, against a statewide policy that does not take regional or corridor differences into consideration. Participants felt that MDT should work with local government to determine the most appropriate approaches for individual corridors and facilities.
- **Prevention of billboard proliferation.** There was a substantial amount of concern about billboard proliferation especially in scenic corridors. There is a belief that there has been an increase in the number and size of billboards and participants wanted MDT to address this problem.
- **Acknowledgement of the needs of tourism.** An increasing reliance on tourism as a major industry in Montana was predicted by many participants. They felt that it is MDT's responsibility to consider this in planning efforts. Issues raised affecting tourism include:
 - Negative impacts from billboards.
 - Lack of rest facilities (People would like to see them within communities rather than outside city limits along the freeway).
 - Signage for attractions and points of interest.
 - Seasonal congestion and safety issues along major tourist routes, especially between Glacier and Yellowstone Parks.
 - Information on location of dump stations for recreational vehicles.
- **Desire for a consistent approach to improvements.** Some participants felt that the decision process for financing improvements to the system is not consistent. They asked MDT to review its approach to making these decisions and ensure consistency across the State.

2. Public Transportation

- **Recognition of the social role of public transportation.** Many participants commented on the continuing increase in the transit-dependent elderly population in the State. In particular, there is an aging population in the rural and small urban areas, and at the same time, a decline in local medical services and shopping, among others. This increases the need for transportation to emerging regional centers that provide these services. Many participants felt strongly that these essential transportation services should be provided where feasible.
- **Concern about lack of coordination between systems.** There was substantial concern about a lack of coordination between the existing local, regional, and intercity systems. Participants see a role for MDT in facilitating coordination and greater efficiency. This could include working to remove existing regulatory barriers to efficient regional services and providing schedule information to the public for all providers.
- **Desire to provide transit-friendly infrastructure.** Participants in the western cities felt that there is a need to meet future transportation demand through increases in transit use. They see a role for MDT and local jurisdictions to provide land use and design guidelines that can facilitate transit use. However, there was strong skepticism about the cost-effectiveness of fixed route systems for moving people.
- **Need to promote public transportation.** Some participants would like to increase public awareness of the environmental and energy benefits of public transportation and asked for more promotion.
- **Concern about the condition of terminals, the lack of intermodal connections and facilities.** There was some concern about the condition of terminals, especially for intercity bus passengers. Participants considered the development of intermodal shared use terminals desirable. Some participants were concerned about the current lack of access to rail and air by public transportation. They felt that the different modes of public transportation should be connected.
- **Relatively little concern about air transportation outside of Northeast Montana.** While a small number of participants were concerned about recent losses of commercial air service, the majority of participants did not raise the level of air transportation service as a critical issue. The participants at the Tribal Government meetings from the Glasgow, Wolf Point, and the Havre

areas were concerned about any potential loss of subsidized service and the high cost of this service.

3. Freight Rail

- **Concern about continued loss of branch rail lines.** The continued loss of freight rail lines is a major concern across the State. Participants felt that in particular long-haul bulk freight belongs on rail rather than trucks. There was agreement that MDT has a responsibility to work with rail operators to keep existing lines viable where possible or at least to ensure that existing public right-of-way is protected.
- **Desire to move freight from truck to rail.** Many participants expressed concern about the size and speed of truck and trailer combinations they encounter on the freeway and their impact on pavement conditions. In many corridors, they saw a conflict between truck and automobile uses. Others pointed to the energy efficiencies and low environmental impacts of rail. All asked MDT to explore ways to facilitate movement of goods by rail rather than truck for these reasons. However, participants recognized that truck movements are the only viable option in many parts of the State.

4. Pedestrian and Bicycle

- **Strong support for incorporating pedestrian and bicycle facilities within the system.** There was a high level of support for making bicycle and pedestrian facilities a consistent component of the State's future transportation system. The priorities expressed were in urban areas and in scenic corridors with high volumes of tourist traffic. Participants want bicycle facilities incorporated into planning for rehabilitation and new projects. There was a recognition that care should be taken to ensure that consideration of bicycle needs in rural areas reflects the low population density and large geographical areas in Montana.
- **Need for agreed approach to design standards.** The participants see a role for MDT to help local governments develop design standards that are conducive to pedestrian and bicycle use in the growing urban areas.
- **Concern that safety is improved.** Participants were concerned about the safety of bicyclists and pedestrians. They asked MDT to reconsider some of its design standards, for example the use of rumble strips on state highways, with their safety in mind. Maintenance practices should not adversely impact use of pedestrian and bicycle facilities.

C. TRIBAL GOVERNMENT ISSUES

This section provides an overview of the key issues identified by the different tribal governments.

- **Importance of Respecting Tribal Sovereignty**

The tribal governments emphasized very strongly that they are sovereign governments and that this should be reflected in the planning process. Furthermore, this needs to be reflected in MDT's continuous planning process and STIP development. This is particularly significant given the size of the land area and the number of state facilities crossing the reservations.

- **Need for Improved Interjurisdictional Collaboration**

In general, the Tribes recognize that there has not been a particularly good working relationship with MDT. However, the planning process and the issue identification work are viewed as a good initiative. They believe that this needs to be translated into meaningful involvement, by developing a plan which reflects tribal concerns in the management of the transportation system.

In many locations, state owned routes pass through reservation lands. The Tribes would like to be involved in a collaborative process for planning, managing, and funding for these routes. For example, the Confederated Salish and Kootenai Tribes are concerned about corridor management and safety issues which they want addressed if tribal right-of-way is to be granted for improvements to Highway 93.

- **Need To Address Indian Contract Preferences**

A number of the Tribes expressed their concern about Indian contract preferences. The Blackfeet Tribe expressed their opinion that it is not possible to establish a collaborative framework for planning and programming until the outstanding disagreements with the MDT concerning Tribal Employment Rights Office (TERO) issues are resolved. Their position is that no projects will be built on the reservation until agreements are reached.

I. Introduction



The Montana Department of Transportation (MDT) is preparing the State's first multimodal Transportation Plan (TranPlan 21). This report summarizes the first stage of public involvement efforts and issue identification for TranPlan 21. It is organized into the following sections:

- Section I. Introduction.** This describes the purpose of the initial issue identification and the approach that was taken.
- Section II. Issues From Meetings.** This provides a summary of all issue identification meetings.
- Section III. Tribal Governments' Issues.** This section documents the issues raised by the tribal governments.
- Section IV. Written and Oral Input.** This lists written and oral comments.
- Appendix A. TranPlan 21 Public Involvement Process.** This appendix documents the TranPlan 21 public involvement process.
- Appendix B. Public Involvement Questionnaire.** This appendix includes the questionnaire used to facilitate public involvement and the results.
- Appendix C. List of Written Submissions.**

A. PURPOSE

The purpose of the dialogue with citizens and transportation interests in Montana was to identify Montana's most pressing transportation issues and to help determine the priorities for the future of the state's transportation system. In fulfilling a requirement of recent federal transportation legislation, it was designed to give early input and direction to TranPlan 21, Montana's first multimodal transportation plan.

B. APPROACH

To solicit input from citizens and transportation interests and providers, MDT provided a variety of different opportunities for comment. They included:

1. Public Open Houses

A series of six open houses for the general public were held in Butte, Great Falls, Missoula, Kalispell, Billings, and Miles City. The meetings were publicized in the media and through MDT's newsletter. Participants were informed about TranPlan 21

and their role in the planning process through a short 35 millimeter slide presentation which was made twice throughout the four-hour meeting. Discussion in small groups following the presentations provided an opportunity for all participants to voice their concerns about the transportation system and identify current and future needs and opportunities. In addition, a short questionnaire (See Appendix B) allowed participants to individually define their priorities. Compared to the recent MDT experience with the Statewide Transportation Improvement Program (STIP), the meetings were well attended.

2. Statewide Focus/Target Group Meetings

A series of roundtable meetings were held in Helena with representatives of agencies and organizations with specific transportation interests. These included:

- Representatives of Montana's urban areas.
- Freight and intermodal interests.
- Public transportation interests.
- Bicycle, pedestrian, and environmental interests.
- State and federal resource agencies.

Participants at these meetings were invited by mail and through follow-up phone calls for a discussion around their specific interests. The invitation letter for each meeting included a list of topic specific questions to facilitate the discussion. A more detailed 35 millimeter slide presentation informed participants about TranPlan 21. This was followed by a roundtable discussion. To ensure modal balance, selected individuals not able to attend the meeting in Helena were contacted by telephone to provide input.

3. Tribal Meetings

An initial orientation meeting was conducted with representatives of the seven tribal governments in Helena. This was followed by a series of issue identification meetings on each of the reservations. Following the roundtable meeting format, these meetings focused on the transportation planning issues of concern to tribal governments in Montana.

4. TranPlan 21 Hotline and Electronic Bulletin Board

In addition to these meetings, MDT provided a 1-800 number (1-800-714-7296) which has been used by citizens unable to attend the meetings. The hotline will be in operation throughout the development of TranPlan 21 to enable citizens to comment on the plan or request information. In addition, the State Electronic Bulletin Board System (444-5648) was used as a mechanism for citizens to provide input.

5. Written Comment

MDT also received a substantial amount of written comment from transportation interests in the state as documented in Appendix C-1.

II. Issue Identification Meeting Results



This section summarizes comment received during the meetings with citizens and transportation interests and providers. The results are presented in turn from the open house meeting and the focus groups.

A. OPEN HOUSES

This section provides an overview of the issues and concerns identified by the participants of open houses in Butte, Great Falls, Missoula, Kalispell, Miles City, and Billings.

1. *BUTTE* - Open House

Twelve people attended this meeting. They included representatives from vocational rehabilitation services, the chamber of commerce, Butte-Silver Bow's planning department, the contractor's association of Montana, and a legislator. The following issues, concerns, and priorities were identified during the meeting.

a. General Issues

The following provides an overview of the overall concerns and issues that were raised by participants.

- Citizens were concerned that energy prices will not stay at today's low levels. Cars may become too expensive for some in the future. Participants therefore felt that it is important for MDT to prepare for a situation where a higher percentage of the population will depend on public transportation.
- In general, participants felt that there should be more alternatives to the car. However, participants realized that MDT can play only a facilitating role in providing air and public transportation services and that automobile travel is and will continue to be the dominant mode of travel for most Montanans.
- Participants felt that in making transportation decisions, it is important that MDT consider the impact of transportation on the economy. They realized that tourism is likely going to be an important industry in the state. MDT should recognize this for example with regard to signage regulations along freeways and the spacing and location of restrooms.

- The safety of both motorists and users of nonmotorized transportation was of importance to most participants.

b. Summary of Issues by Mode

Participants raised a number of issues with regard to the different modes of transportation. They are listed below.

Highways

- In general, the road and highway system in Montana is in good condition and functioning well, there is no need to change the way MDT is dealing with it.
- The road system in Montana is basically complete - with the exception of a few segments which are sometimes already congested now or will likely be congested in future years. The focus should be on maintenance and preservation rather than system expansion.
- Some participants felt that highway projects should consider the need of tourists. Examples cited were the Highway 93 and Highway 2 corridors. Tourists needs include: rest stops (within communities rather than on the freeway), good signage or even radio information at points of interest, pull-outs at scenic vistas, and recreational vehicle facilities such as dump stations.

Rail

- MDT should work to prevent the loss of additional rail lines and to ensure that the right-of-way of abandoned rail lines does not get lost to the public.
- There was interest in reinstating lost passenger rail service in southern Montana.

Public Transportation

- The most pressing public transportation issue identified is access from cities such as Anaconda to Butte.
- Most participants also thought that the provision of transportation for the elderly and disabled is an issue that should be addressed by TranPlan 21. Current trends show that the population is increasingly older and the

services in those communities declining. Therefore it is going to be increasingly important to provide public transportation access to services in the regional centers.

- While some participants felt that public transportation services should be increased, they also realize that there are severe limitations on the ability of public transportation to address the needs of most citizens in Montana.

Pedestrian and Bicycle

- Some participants requested there should be more provisions for nonmotorized modes. However, MDT should keep in mind the limited role bicycles play in moving people and set funding priorities accordingly.
- One representative of local government expressed concern about the current lag in the availability of funds from the Enhancements program. He felt that MDT should work towards more speedy distribution of the funds.

2. GREAT FALLS - Open House

This meeting was attended by 20 people, including representatives of private business, city and county government, state and federal agencies, and a legislator.

a. General Issues

The following provides an overview of the overall concerns and issues that were raised by participants.

- Participants felt that current social trends in the State will change the demands placed on the transportation system during the twenty year period. Smaller communities will likely continue to lose services and facilities such as schools and medical services. Participants expected an increased need for public transportation to regional centers providing medical and other services because of continued increases in the portion of the population that is elderly in these areas.
- There was concern over the decline in intercity public transportation that the State experienced in recent decades. Participants mentioned the loss of air services, passenger rail in the southern part of the State, and deterioration in intercity bus service.

- Some participants expected that there will be a reduction in the importance of resource-based industries in the state that will reduce the need for bulk freight transportation options.
- Some participants suggested that MDT should have a role in dealing with international freight and trade issues. Mentioned was for example promotion of international trade corridors such the Rocky Mountain Trade Corridor.

b. Issues Affecting Local Government

A number of local government representatives were present at this open house. Their comments with regard to issues important to local government are listed below.

- Participants representing local governments felt that MDT's current planning approach provides for an appropriate level of local involvement in the process. There were concerns, however, about a lack of communication and coordination during project development and implementation.
- Local government representatives also thought that there is a role for state government in working towards land use patterns that can be supported by the available (transportation) infrastructure funding. Specifically mentioned were some rural corridors in western Montana, most notably, Highway 93. At the same time, participants felt that land use planning is and should remain in the local domain.
- Some local government representatives expressed concern about the current boundaries of MDT's administrative districts which seem to make adequate consideration of regional traffic patterns and corridors difficult.

c. Summary of Issues by Mode

Participants raised a number of issues with regard to the different modes of transportation. They are listed below.

Highways

- The highway system in Montana has been improved during the last 10 years. Participants felt that MDT has developed a good network for Montana and think that it is generally in good condition.

- Some participants felt that MDT should examine IVHS applications on the highway system to improve safety and tourist information.
- Scenic highways will require more attention in the future when, as expected, tourism becomes increasingly important as an industry for the State.
- There was debate about the need for highway improvements between Great Falls and Billings. Some participants see a need for improvements, others argued that current and foreseeable volumes do not justify it.

Rail

- Some participants were concerned about the loss of rail lines that Montana experienced in recent years. They felt that the state should get involved in dealing with this issue and work to preserve rail corridors for public right-of-way.
- Participants pointed out that truck movements are critical to much of the agriculture and resource-based economy. This is especially so because they compete with rail and keep rates down.

4. MISSOULA - Open House

Twenty-nine people attended this open house. The majority of the participants represented local elected officials and staff, or special interests such as environmental and bicycle advocates.

a. General Issues

The following provides an overview of overall concerns and issues that were raised by participants, including: the coordination of transportation and land use planning, transportation pricing and finance, and the role of MDT.

Planning

- Some participants felt that transportation planning should more adequately take the regional consequences of transportation decisions into consideration. For example widening a roadway from two to four lanes impact neighboring communities who may not be planning to increase capacity on the same facility within their boundaries. The communities

need to cooperate to ensure that the regional and not only the local system can function effectively.

- Participants were also concerned about an apparent lack of coordination between land use decisions and transportation planning. They felt that transportation planning should be more proactive, set goals and priorities, for example to support a local community's land use goals, and adhere to them.
- Related to this issue, participants thought that expected population growth in urban areas should be accommodated in a way that supports alternative modes of transportation. This would for example include the provision of design standards that encourage alternative modes of transportation in urban areas and appropriate land use patterns for new development.
- The need to coordinate planning with adjacent states was identified as an important issue.

Transportation Pricing and Finance

- Some participants asked MDT to consider changes to the existing pricing structure for transportation. One person in particular felt that the gas tax should be increased to more adequately cover the cost of transportation.
- In addition to a change in the pricing structure, participants asked MDT to look at more creative and flexible ways of using gas tax funds. This could for example include a reevaluation of current regulations which do not allow use of these funds outside the roadway right-of-way. This was considered a barrier to funding bicycle-only routes.

MDT's Role

- Participants thought that, during the timeframe of TranPlan 21, the role of MDT is bound to broaden to include providing information to local jurisdictions and facilitating the approved solution of transportation problems.
- Participants felt that there is a need for MDT to assist small urban and rural areas with transportation planning at the regional and corridor level.
- Some participants focused on MDT's role in vehicle inspection and maintenance. They felt that MDT should work towards stronger controls

both at the state and federal level to reduce air pollution caused by motor vehicles and unclean fuel.

b. Summary of Issues by Mode

Participants raised a number of issues with regard to the different modes of transportation. They are listed below.

Highways

- Participants felt that MDT should reconsider its current access management and control policies for state facilities and place stronger controls on some highways, for example Highway 93, to increase safety.
- At the same time, participants realized that there is a need for a differentiated approach to access control based on the characteristics of individual corridors. Colorado was mentioned as a good example of this approach. Participants emphasized that good coordination with local governments was important in developing tailored approaches to access control and management.
- Bridge preservation and replacement needs were identified as an important concern.
- There was concern about the rapid increase in the number and size of billboards along state highways, in particular in scenic areas. Participants asked MDT to tighten its billboard controls and noted that some counties have stronger controls than the state.
- Like participants in other cities, participants from the Missoula area felt that the highway system is adequate. They recognized, however, that there is a need for improvements on specific facilities.

Public Transportation

- Participants were concerned that the current approach to public transportation services is not effective. They perceive existing fixed route service as impractical and would like to see demand responsive service and smaller vehicles.
- Some participants also felt that there needs to be more public education about the environmental advantages of using public

transportation. They added that it needs to be more convenient and that future land use patterns should be more conducive to transit.

- There was concern about a lack of intercity bus services in the state. Some participants felt that public dollars should be spent on these services rather than low volume air transportation facilities.
- Several participants commented on current regulatory requirements that restrict regional public transportation services. They asked MDT to work on eliminating these barriers. There was concern that Public Service Commission regulatory requirements are limiting public transportation options.
- Participants felt that with expected growth in population, public transportation in the north/south corridor will become more feasible and asked MDT to look into opportunities for rail in that corridor.

Pedestrian and Bicycle

- Participants thought that MDT should work towards increasing the role of biking and walking in the transportation system.
- One request was that MDT consider the accommodation of biking and walking at the early stages of construction and rehabilitation projects, they should not be an afterthought. It was suggested that the American Association of State Highway Transportation Officials (AASHTO) bicycle standards be used.
- Participants also requested that MDT revisit its design standards to make sure that facilities are conducive to nonmotorized modes. Mentioned specifically were rumble strips on freeways which are a safety feature for car traffic but hazardous for bicycles. In addition, the state should provide design standards for urban and rural facilities to be used by local jurisdictions.

5. KALISPELL - Open House

Thirty-seven people attended this meeting. The majority of the participants represented local government and a variety of different interest groups, including transit, motorcycle, environmental, and community interests.

a. General Issues

The following provides an overview of the overall concerns and issues that were raised by participants.

- Because of their experience with recent growing pains in the Flathead region, participants thought that planning must address the impacts of population growth in western Montana on the transportation system.
- Because of their experience around the issue of Highway 93 many participants felt that there is a need for regional planning with regard to both land use and transportation. They perceive a lack of coordination among local jurisdictions and look to MDT to facilitate and coordinate the planning process at the regional and/or corridor level. This could help economic development by establishing a "managed" tourist corridor.
- One participant even suggested that in areas like the Flathead, MDT should tie the provision of transportation dollars to local communities to the existence of long-range plans.
- Many participants felt strongly that planning needs to stay within environmental bounds. They see Montana's natural environment as an important aspect of quality of life and an economic asset for the growing tourism industry. Of particular concern was the loss of vistas and view sheds in the Highway 93 corridor.
- Participants felt that fuel tax dollars should be spent on transportation and not be diverted to other uses.
- There was concern that the current funding distribution mechanism for transportation projects does not adequately take needs into consideration. Participants felt that the distribution does not reflect needs arising from rapid growth in the western parts of the State.
- Some participants were concerned about the need to preserve corridors, for example, a bypass route for Highway 93 and felt the state and local communities should, if necessary, even use the right of eminent domain to ensure adequate capacity.
- Some participants stated that they came in part to emphasize the importance of public participation in the planning process.

- As in other communities, participants were concerned about the proliferation of billboards along major facilities. Some acknowledged the need to inform the traveling public and stated that at least height and size restrictions should be considered. One person said that Enhancement funds should not be used for removal of billboards.

b. Summary of Issues by Mode

Participants raised a number of issues with regard to the different modes of transportation. They are listed below.

Highways

- All participants agreed that the Highway 93 and the congestion and safety problems in the corridor need to be addressed. Most agreed that improvements are needed, however, not all would like a substantial expansion of the capacity of the facility.
- Several participants indicated that access management for major facilities like Highway 93 is an issue that should be addressed in the planning process.
- As in other communities, participants felt that there was a lack of rest facilities along major freeways. They also suggested that they be located within local communities.
- Greater attention to motorcycle safety was requested.

Rail

- As in other communities, some participants felt that the issue of passenger rail in the western north-south corridor should be explored.

Public Transportation

- Even more than in other communities, participants expressed concern about the need for transportation services from the outlying areas to the regional service centers. Because of the rapid population growth in the area, the elderly have been priced out of the housing market in areas close to these facilities and the local transit system finds it increasingly difficult to serve this particular population.

- Some participants commented on the large numbers of private vans from hotels and resorts picking up customers from air and rail. They suggested that coordination of these services with public transportation may reduce the number of vehicles on the road system and increase efficiencies.
- Participants identified the goal of developing an intermodal public transportation terminal. The facility would be shared between public and private sector transportation providers.

Pedestrian and Bicycle

- Many participants indicated that bicycle and pedestrian facilities in the Flathead region should be considered as an essential part of the transportation system. They pointed to both options for commuting and to their importance for the local tourism industry and requested that bicycle planning be on a regional basis to ensure connectivity.
- Some participants requested that pedestrian and bicycle facilities be considered with any future roadway improvements along with landscaping and other visual improvements.
- Representatives of local government expressed concern about the fact that Enhancement funds that would pay for some of these facilities have not been provided yet.

6. MILES CITY - Open House

Fourteen people participated in the open house in this city. They included representatives from local government, the business community, and ranchers.

a. General Issues

The following provides an overview of the overall concerns and issues that were raised by participants.

- Some participants were concerned about the fact that some residents drive to neighboring states to shop because they are easier to access than cities in Montana.
- One participant asked MDT to work with the Motor Carriers Association to resolve problems with high diesel fuel prices in the state. Tax revenue

is lost to the state because trucks will cross the state without filling up. He suggested that Montana look into establishing a system similar to that of North Dakota which requires proof of gas purchase within the state for licensing of trucks.

- Participants felt that the current distribution mechanism for roadway funds, based on population, is unfair and asked MDT to reevaluate it. There was also a request for an effort to change current financial district laws.
- Participants felt that economic development needs were stronger than the needs for environmental protection in the eastern part of the State.

b. Summary of Issues by Mode

Participants raised a number of issues with regard to the different modes of transportation. They are listed below.

Highway Issues

- Participants expressed concern that the transportation system in eastern Montana has not changed significantly over the last 10 years. Participants felt that a north/south corridor was needed in eastern Montana. An issue mentioned by several participants was the gravel road between Terry and Brockway which should be paved but has been lacking the necessary funding for quite some time.
- Participants commented that the completion of the Interstate system is a positive aspect of the transportation system.
- It was pointed out that recreational travel is important in eastern Montana. However, lack of direct connections often limits or hinders tourist travel forcing tourists to take detours through the Dakotas to reach locations in Montana.
- There was concern about the inability of some counties to carry out necessary maintenance activities on county roads. Participants suggested that MDT look at swapping maintenance responsibilities to ensure that important facilities can be maintained. An example was to switch frontage road maintenance which is currently performed by the state with that for Highway 253 which is county responsibility.

- The group asked MDT to work on increasing the number of rest areas in eastern Montana. For example, there are no rest stops between Forsyth and Roundup, a distance of over 100 miles. It was suggested that a farmer or rancher could be paid to undertake maintenance.

Public Transportation

- Participants felt that overall eastern Montana has reasonable bus service. However, the frequency of buses and service linking to rail service could be improved. Missing is a good north/south bus connection.
- The lack of access to air terminals from northeast Montana was identified as a significant issue.
- As at other meetings, there was interest in reestablishing AMTRAK's southern route in Montana.

7. BILLINGS - Open House

Eighteen people attended the open house in Billings. They represented local government, the business community, freight and bicycle interests, the Bureau of Indian Affairs, and a U.S. Senator.

a. General Issues

The following provides an overview of the overall concerns and issues that were raised by participants.

- One participant felt that STIP should consider other existing transportation plans.
- There was concern about air quality problems. MDT was asked to address this issue.
- The participants indicated that the planning analysis should address the allocation of resources statewide. In particular, whether funds shall be disproportionately allocated to regions with relatively low population.
- Participants identified the difficulties counties face in maintaining County roads. There needs to be more coordination between counties off the state-owned system.

- The participants identified a need to coordinate land use and development priority with transportation objectives. One participant, a County Planning Commissioner, identified the need for tools and technical assistance to help improve the permitting decisions that are made and their impact on transportation.

b. Summary of Issues by Mode

Participants raised a number of issues with regard to the different modes of transportation. They are listed below.

Highway Issues

- Participants consider the extent of the road system adequate but would like it to be in better condition.
- Access to recreation areas (lakes) needs to be improved.
- There is a lack of pull outs and rest areas to allow people to enjoy scenic views.
- As at other meetings, participants would like MDT to curb the proliferation of billboards.

Public Transportation

- Public and private transportation infrastructure should be designed to accommodate public transportation, for example through the provision of pull-outs.
- Participants were concerned about the availability and cost of air service. They felt that MDT should get involved in securing service.
- One participant would like rail service on the southern route to be reestablished.
- MDT was asked to work to avoid the public transportation mistakes that have been made on the East Coast.
- Concern was expressed that Montana not repeat the "mistakes made elsewhere". Therefore, planning should address longer range needs for public transportation. Examples cited were public transportation access for new developments.

- A more pedestrian friendly environment was raised as an important issue.
- Concern was expressed about the low and decreasing levels of intercity air service. The high cost and poor service was considered a barrier to economic development. However, the participants were unsure about whether there should be a role for the State in ensuring minimum levels of service.

Pedestrian and Bicycle

- One participant asked MDT to aggressively pursue bicycle and pedestrian issues and to build more facilities.
- Also requested were designated bicycle routes between major urban areas, for example between Bozeman and Billings.

Freight Issues

- Some participants were concerned about truck speeds and asked MDT to reduce the speed limit for trucks.
- In addition, MDT should encourage freight movement to occur on rail rather than trucks.

B. FOCUS/TARGET GROUP MEETINGS

This section summarizes the issues identified by the participants in five focus group meetings held in Helena.

1. MPO/Urban Areas

Ten representatives of metropolitan planning organizations, cities, and counties attended this meeting.

a. General Issues

The following provides an overview of overall concerns and issues that were raised by participants.

Transportation and Land Use Planning

- Participants felt that there was a need for a regional or corridor-level planning mechanism. It was suggested that MDT could take the leadership role through the Districts.
- One participant expressed concern that the TranPlan 21 planning process will cause smaller jurisdictions to lose funds.
- Land use planning was also an issue of concern for most of the group. Participants felt that MDT should work with local governments to facilitate the process in those areas of the state where it is necessary.
- Participants called for access controls on major facilities. One participant felt that current problems exist because of a past lack of access control. MDT has a responsibility to address these issues and should coordinate its efforts with the local communities.
- One participant suggested that the planning approach should ensure that Montana is prepared for a variety of different future development scenarios with different impacts on the transportation system.
- It was also suggested that MDT might provide some ISTEA funds for local and regional planning activities to help local jurisdictions carry out their functions.

b. Coordination with Other Planning Activities

- Participants felt that MDT should make an effort to tie its planning activities into other efforts being carried out in the larger region. This includes, for example, trade corridor issues and the Trail of the Great Bear.

Public Involvement

- Several participants felt strongly that a good public involvement process is essential for successful planning, especially early in the planning process.
- Commitment to public involvement must penetrate all levels of MDT, it should not be limited to the top policy level.

- Public involvement must be recognizable in the plan and be reflected in funding decisions.

Summary of Issues by Mode

Participants raised a number of issues with regard to the different modes of transportation. They are listed below.

Highway Issues

- Most participants felt that the highway system is basically complete. Only a few facilities, for example US-93, need capacity expansion. They would like MDT to focus on maintenance and preservation rather than system expansion.
- One participant pointed out that the most recent infrastructure study, conducted in the mid eighties for the legislature, showed a \$50 billion deficit for transportation infrastructure in the state. Participants indicated that the problem has grown since. This means that MDT must develop a clear vision of the system to target funding where it is most needed.
- Participants were particularly concerned about the condition of county roads in the state. They indicated that many of the roads and bridges maintained by the counties are in bad repair and that the system of county roads has not changed in the last ten years. A problem exists in particular for small counties where the main highways are not part of the NHS system since other state and federal funding has decreased in recent years.
- The differences between eastern and western Montana require different planning approaches. In western Montana, Interstate freeways are the most important facilities, whereas eastern Montana is dependent on a functioning system of farm to market roads, many of which are under the jurisdiction of the counties.
- One participant indicated that it is important to start developing other modes now, even at the expense of losing some roadway capacity.

Public Transportation

- Here, as at other meetings, participants expected that the special needs population, elderly and disabled citizens living in rural areas

without necessary services, will grow over the planning horizon. Their needs, transit services from the rural areas to the emerging urban service centers, must be addressed by the plan.

- Considering the relatively low passenger numbers and dispersed land use patterns, participants felt that demand-responsive systems are most likely the most efficient approach to serving this need.
- Participants also felt that more efficient coordination between different systems was needed in some locations.
- One participant stated that many citizens treat public transportation as a tolerated expense. He expected that ridership would continue to be moderate and that the car will remain the mode of choice for most Montanans.
- Participants felt in general that there is a lack of adequate intercity bus service in the state. The system is inefficient, facilities and terminals are in bad shape, and scheduling is often inconvenient. Intercity bus service needs to be better connected to local service.

Passenger Rail

- TranPlan 21 should address passenger rail in the southern east-west corridor and a north-south connection along the Trail of the Great Bear corridor.
- Participants did not, however, want MDT to get involved in the provision of rail service. Rather, its role is seen in ensuring that the state provides an environment that encourages service.

Truck Movement

- An important issue for several participants was that most downtowns were not designed for the large trucks the industry uses, causing safety problems. Specifically mentioned were Kalispell and Missoula.
- Also of concern is the impact on pavement conditions from heavy truck traffic. Participants saw a role for MDT in encouraging freight movement from truck to rail.

- In addition, the state has a role in addressing rail/truck terminal issues. MDT should not, however, spend scarce resources on providing these facilities but rather create an environment that encourages private investment.

2. Intermodal/Freight Focus Group

The purpose of this roundtable discussion was to solicit early input from representatives of various intermodal and freight interests in the state. Eleven persons from various interest groups attended the meeting. The discussion focused mostly on freight rail issues because no representatives from the trucking industry were able to attend the meeting.

a. General Issues

- Participants asked MDT to ensure that the potential impacts of North America Free Trade Agreement (NAFTA) on Montana's transportation system are addressed in the plan. There were different opinions, however, with regard to actual effect of the agreement on the state. To the extent possible, MDT should promote economic development in the State through transportation investments, and be poised to take advantage of NAFTA.
- In connection to the potential impact of NAFTA, some participants pointed out that it may not be necessary to look at entire corridors to determine deficiencies. Recent research indicates that it may be more useful to look at specific facilities, such as border crossings, which may constitute a bottleneck. It would be more efficient to work on eliminating these bottlenecks rather than trying to improve entire corridors.
- Participants felt that the Highway Commission's mandate should be changed to that of a Transportation Commission. The Commission has to be knowledgeable about rail, public transportation, and air as well as about highways to provide the appropriate policy guidance for MDT.
- Participants requested that MDT coordinate its work with that of the Departments of Commerce and Agriculture to ensure that it understands the needs of the state's industries. In particular, there should be a person or an office at MDT with knowledge of Interstate Commerce Commission requirements related to the transportation needs of Montana's industry.

- The group also suggested that MDT become more active in informing both state and federal representatives about transportation issues and to lobby to resolve transportation issues both at the state and federal level.
- Participants pointed out that in the past, freight movement in Montana has typically been on the east-west routes. Now freight routes are developing on the north-south routes, too. The state's transportation system, however, is not prepared for that. This includes for example Canadian grain destined for southern locations, impacting the Hiline corridor. The plan must address these issues.

b. MDT's Role in Addressing Freight Issues

- The group recognized that most freight facilities are in the hands of the private sector. It felt very strongly that it would not be appropriate for MDT to own and/or operate facilities in the future. However, there is a facilitator role for MDT. This includes:
 - Planning.
 - Acting as intermediary between carriers.
 - Helping to reduce red tape where possible.
 - Reporting on opportunities for the private sector.
 - Providing information and advice where needed and requested.

Freight Rail

- Participants representing rail interests pointed out that rail is a better option than truck for long-haul bulk commodity shipments. In addition, it creates less environmental damage than truck freight. For those reasons, MDT should get involved in addressing freight rail issues. Suggestions for MDT's role include:
 - Carrying out rail planning in addition to multimodal planning.
 - Possibly subsidizing short and branch lines.
 - Advising and informing on issues related to freight rail, both the freight community and local government.
 - Conducting needs analysis to determine whether branch lines should be changed to short lines.

- Conducting research to find out what is making branch lines unviable and work on eliminating these causes. It was pointed out that this process should begin before abandonment is close, because deferred maintenance creates the need for major improvements to keep lines viable.
- Examining tax relief options for rail. It was pointed out that taxes in Montana are very high and local officials often do not consider all options because school funding is dependent on rail taxes.
- The group asked MDT to consider that private sector rail owners make decisions that increase costs for the public. They indicated that MDT needs to be flexible and provide assistance to the private sector in cases where this is the cheapest option.
- At grade railroad crossings were considered to be continuous problem. Participants wanted MDT to fund separations where they are needed.
- Rail car shortages were considered to be a continuous problem. The group pointed out that 5000 cars are leased to the Canadian railroad every year.

Trucking Issues

- Issues related to trucking mentioned by the group were focused on legal differences between Canada and the United States which put the United States trucking industry at a disadvantage. Participants asked MDT to lobby for removal of these inequities. Issues included:
- United States regulations exempting Canadian configurations from United States restrictions on size and weight while Canada imposes restrictions on American combinations.
- United States regulations exempting Canadian trucks from use taxes on highways.
- United States trucking firms are required to pay worker's compensation on both sides of the border whereas Canadian truckers pay only in Canada.

Public Transportation

- Participants indicated the need for a north-south passenger connection by air, rail, or bus into Canada.

- Some members of the group also pointed to a need for more intercity public transportation in the eastern part of the state. Access from eastern Montana to medical facilities in Billings and other cities in the western part of the state should be provided at least once or twice per week.
- Participants felt that there was a lack of passenger air connections to the West Coast hampering tourism.
- One participant asked MDT to investigate the possibility of school children using the regular public transportation.

4. Public Transportation Focus Group

Eleven persons from public transit agencies, social service agencies, intercity bus, and other passenger transportation interests attended this focus group. MDT also received several written comments from individuals who were invited to this focus group but unable to attend. They are listed in the following sections.

a. Public Education and Information

- One participant indicated that there is a need for public education about the true costs of driving.
- The group also noted a lack of information about current services in the public. Some suggested that MDT should take over the role of information broker and provide information on the services available. It would not only provide information about existing services but also help to tie the different systems together.

b. Role of Public Transportation

- Most participants realized that public transportation is not a viable option for most Montanans. They thought that it is perceived by many as a necessary public expense to provide mobility to the elderly and disabled.
- The group considered access to public transportation a vital necessity for the elderly and handicapped. Like other groups, it pointed to the increasing dispersion of the transit-dependent population and the increasing portion of the population in rural areas that is dependent on transit.
- Participants also felt, however, that MDT should be prepared for transit to take over a larger role in the future when car ownership could become prohibitively expensive for a larger part of the population. However, they

pointed out that it has been very difficult to increase public transportation use. There has been a decline in ridership.

- The group indicated that there might be some areas where increased transit service might be viable and beneficial in increasing mobility. Mentioned as an example was the Flathead region and tourist transportation in the area.

c. Public Transportation Facilities

- One participant pointed out the need for design standards that incorporate transit needs. This could also include land use patterns that are more conducive to transit. There may be a role for MDT in providing information on transit-friendly design standards and land use patterns to local communities to facilitate transit use.
- Representatives of the disabled community would like MDT to become more active in ensuring accessibility of public transportation facilities and vehicles. This includes lifts on fixed-route urban transit, access to bus terminals and bathrooms, and access to regional air transportation which is difficult because the small planes can be boarded only via stairs. A further issue raised was the opening hours of existing bus terminals which tend to be closed during the late evening and night, leaving riders stranded outside.
- Also of concern was dilapidated condition of many bus terminals and the feeling of a lack of safety that they create. Participants suggested that there might be a role for MDT in facilitating or even funding improvements to bus terminals and transit centers.
- Participants suggested that MDT explore the potential of using air terminals as intermodal facilities that could serve as bus terminals. They are in good condition, have ample capacity, and are usually open much longer than bus terminals. This would also provide regional public transportation access to the airports.

d. Public Transportation Funding

- Participants asked MDT to review the current regulations with regard to Section (18) funds. They also called for a review of the criteria used for distribution of Section (18) funds and indicated that some of it might be applied to intercity transportation.

- Participants believe that there are regulatory barriers affecting intrastate public transportation that are adversely impacting public transportation service. MDT will need to work with the Public Service Commission (PSC) to address these.
- One participant pointed out that there are legal problems with charging fares and asked MDT to work to eliminate the barriers to this funding source.
- The representative of the Developmental Disabilities Planning and Advisory Council indicated that his agency might be able to provide some funds for a statewide transit information center.

5. Environmental and Nonmotorized Transportation Focus Group

Six representatives from environmental and nonmotorized transportation interest groups attended this meeting. The issues identified below are supplemented by written comment received from those unable to attend.

a. Public Involvement and Information

- Participants asked MDT to strengthen its public involvement efforts to increase comment. Suggested were the use of television, newspaper articles, and enhanced advertisements that provide people with a connection to their own lives, and small general public focus groups to which people are invited personally.
- There was strong consensus in the group that there is a need for public education about the costs and consequences of business as usual transportation decisions. Participants felt that was part of MDT's responsibility. Participants anticipate that there will be a change in the way people think about transportation. This applies to both the general public and to transportation professionals and community planners alike.
- In connection with the issue of sustainability one participant stated that to address sustainability, public involvement has to be an iterative process; that is defining for the public what sustainable options are and in this way, creating a dialogue about the future.

b. Land Use

- There was consensus in the group that land use is an important issue that has not been addressed adequately in the past. Land use decisions are long

term decisions and therefore need to be made with care. Participants felt that there is a role for the State to facilitate land use patterns that are sustainable on the long run.

c. Sustainability

- One participant suggested that needs-based planning is the wrong approach to planning. He suggested an approach that considers the sustainability of the transportation system. (While he indicated that may not be possible to follow through entirely, it would be an important step to say this is what we can afford and this is what it will look like if we spend the money this way, and this is how it will look like if we spend the money differently.)

d. Changes to the Planning Process

- The group asked MDT to research planning approaches used elsewhere to identify successful and unsuccessful actions.
- The use of pilot projects was also suggested.
- One participant suggested that MDT use the concept of carrying capacity, based on an analysis of the resources that limit expansion of transportation options. These include: land, energy, and funds to determine sustainable options.
- Another participant asked MDT to consider the lifespan of transportation investments rather than a 20 year timeframe. He suggested that 50-100 years would be more appropriate.

e. Trip Reduction Strategies

- Participants suggested a few strategies to reduce the number of single occupant trips. They include:
 - Limiting parking facilities, in particular at schools.
 - Working to eliminate subsidized parking.
 - Reducing speed limits to encourage the use of nonmotorized modes. This would apply in particular in urban areas as an air pollution control measure.
 - Working with other state agencies to increase the use of vanpools.

f. Funding

- Participants suggested that MDT consider least cost planning methods similar to those used in energy planning for transportation decisions. This would include an analysis of both demand and supply side options. TranPlan 21 should consider the costs and potential impacts of transportation decisions if alternatives are not developed.
- There was a request to take a look at changing current laws with regard to the distribution of gas tax funds to allow for innovative transportation projects.

g. Environmental Issues

The group identified several environmental issues to be addressed by MDT. They include:

- Wetland mitigation, one participant would like MDT to make sure that there are no net losses, there should be no "borrowing from the future."
- Water quality protection.
- Air quality mitigation; this should be a consideration in transportation funding decisions. This is particularly important in the Bitterroot area.
- Wildlife impacts; these should receive more attention.
- Visual and scenic impacts; billboards were mentioned as an issue in need of resolution.

h. Pedestrian and Bicycle

- Participants believe there is a need to change the design of roads and bridges to make them safer for nonmotorized transportation. Specific issues to be addressed are the provision of shoulders that are wide enough to accommodate bicycles and pedestrians and a reevaluation of the rumble strips.
- Participants asked for a state policy that would ensure that all new and reconstruction projects include facilities for nonmotorized modes.
- The group requested better signing for bicycle and pedestrian facilities.

- Participants would like MDT to develop a statewide plan that identifies bike routes across Montana.
- MDT was also asked to better facilitate intermodal connections and opportunities for nonmotorized transportation such as bicycle racks on buses.
- The bicycle facilities at the local level should link high destination areas with trails. The group would like to see paved bicycle paths.

i. Community Transportation Enhancement Program (CTEP)

- Projects should not be excluded from eligibility for CTEP because they are smaller than \$10,000.
- The group asked MDT to evaluate whether more than 10 percent of CTEP funds should be spent on Enhancements.

6. State and Federal Resource Agencies Focus Group

Seventeen representatives from state and federal resource agencies attended this meeting.

a. Public Involvement

- Participants, as at other groups, pointed out the importance of providing opportunity for input. They also perceived a need for better public education and communication to aid public involvement.
- The group also felt that there are a number of unresolved issues that are important for the planning process which need to be brought before the public.
- Members of the group also indicated that there is a need for MDT to gain credibility with the public and to demonstrate a commitment to other modes.

b. Funding

- Currently, some projects get funding just because they are ready to go and funds would otherwise lapse. This should, in the opinion of some members of the group, not continue.
- There needs to be a reevaluation of the mechanism for allocating resources. Participants indicated that solutions need to be equitable. The current distribution of funds based on population may not be adequate to address needs.
- Members of the group also pointed to the increasing unwillingness of the public to be taxed to pay the true cost of transportation projects which needs to be considered in the planning process.

c. Planning Process

- Members of the group indicated a desire to see change in the mandate of the Highway Commission to encompass all modes.
- The planning process needs to acknowledge the fact that Montana's economy is changing. Future road needs will be less driven by the natural resource industries than the requirements of the services industries sector.
- Participants indicated that there is a change occurring in what people expect from MDT. People are increasingly concerned with land use and corridor management. The plan needs to reflect these trends.
- Members of the group asked MDT to look into developing regional planning organizations to deal with these and other issues. This would also facilitate coordination with other agencies.
- The plan must also be able to deal with the uncertainty in the planning environment. Members of the group asked what tools could be used to do that.
- The transportation of hazardous materials through the state and its regulations was raised as an issue.
- The plan needs to consider the environment, air quality, wetlands, scenic areas to protect the scenic value and enhance visual aspects of travel in Montana.

- Members of the group urged MDT to address rail issues more proactively. They stated that the department has lost the confidence of the commodity shippers in its ability to adequately deal with these issues. They suggested that the shippers may request that the responsibility is returned to the Department of Agriculture. MDT needs to develop a mechanism that ensures that bulk freight issues are addressed adequately in the plan. This includes establishing the appropriate channels of communication with ICC.

d. Coordination with Other Agencies

- MDT currently has Memoranda of Agreement with other agencies concerning environmental review of projects. Participants agreed that it would be beneficial to expand this beyond the project level. A member of the group suggested that they be changed to include planning.
- The group suggested that state agencies should have a voice in establishing priorities for the plan. This could be achieved through an advisory committee. Group members suggested that MDT coordinate its plans with the goals and plans of other agencies.
- The planning process should define a process to address requests for projects. For example, the Department of Fish and Wildlife's Trail Plan should be able to compete for STIP funding.
- MDT was asked to work with the tourism and recreation agencies to coordinate trails programs and encourage tourism in the less traveled areas of the state. This would include looking for approaches to promote corridors for tourist travel and to identify opportunities for getting tourists off main highways and to attraction sites.
- MDT should also try to work with other agencies to ensure appropriate access to the facilities of other agencies, for example Forest Service roads and to consider the impact of its decisions on these facilities.
- A similar approach was requested with regard to the cultural and historic heritage of the state. MDT facilities can have a negative impact for example on historic town centers. Enhanced cooperation and agreements with other agencies as well as adequate public involvement are needed.

III. Tribal Governments' Issues



The statewide plan development process was designed to provide tribal governments and their representatives with the opportunity to participate at an early stage. The process included an initial meeting, held in Helena, attended by representatives from most of the tribes (all were invited) and subsequent meetings on each of the seven reservations in the State. In the case of all the meetings, except on the Fort Peck Reservation, input and participation was provided directly by members of the Tribal Council and their staff. Therefore, issues identified in these meetings represent the principal transportation planning concerns of the tribal governments in Montana.

This section describes the results of this early involvement and documents the issues identified during the meetings with the tribal governments and their representatives.

A. OVERVIEW

This section provides an overview of the key issues identified by the different tribal governments.

- **Importance of Respecting Tribal Sovereignty**

The tribal governments emphasized very strongly that they are sovereign governments and that this should be reflected in the planning process. Furthermore, this needs to be reflected in MDT's continuous planning process and STIP development. This is particularly significant given the size of the land area and the number of state facilities crossing the reservations.

- **Need for Improved Interjurisdictional Collaboration**

In general, the Tribes recognize that there has not been a particularly good working relationship with MDT. However, the planning process and the issue identification work are viewed as a good initiative. They believe that this needs to be translated into meaningful involvement, by developing a plan which reflects tribal concerns in the management of the transportation system.

In many locations, state owned routes pass through reservation lands. The Tribes would like to be involved in a collaborative process for planning, managing, and funding for these routes. For example, the Confederated Salish and Kootenai Tribes are concerned about corridor management and safety issues which they want addressed if tribal right-of-way is to be granted for improvements to Highway 93.

- **Need To Address Indian Contract Preferences**

A number of the Tribes expressed their concern about Indian contract preferences. The Blackfeet Tribe expressed their opinion that it is not possible to establish a collaborative framework for planning and programming until the outstanding disagreements with the MDT concerning Tribal Employment Rights Office (TERO) issues are resolved. Their position is that no projects will be built on the reservation until agreements are reached.

B. THE BLACKFEET RESERVATION, THE BLACKFEET TRIBE

Members of the Blackfeet Tribal Council and their staff raised the following issues:

- **Need To Address Indian Contract Preferences**

The Tribal Council believes it is not possible to establish a collaborative framework for planning and programming until the outstanding disagreements with the MDT concerning TERO issues are resolved. Their position is that no projects will be built on the reservation until agreements are reached.

- **Need to Respect Tribal Sovereignty**

There was considerable discussion about the need for the State government, including MDT, to improve its relationship with the Blackfeet Tribe. The participants expressed their concern that the State does not understand that tribal jurisdiction is based on sovereignty.

The participants suggested that MDT hold an annual transportation summit between the Tribes, MDT, the Bureau of Indian Affairs (BIA) and counties.

- **Concern About Impacts of International Trade and Tourism**

The Blackfeet expect that the North American Free Trade Agreement (NAFTA) will have an impact upon their roads. They would like assistance from the MDT to answer the following questions: What is the impact of NAFTA on their Reservation? What will be the impacts of any increased truck volumes on the roads? How will these issues affect BIA funding?

- **Desire to Have Transportation Support Economic Development Goals**

The Blackfeet are actively involved in pursuing economic development initiatives. The Tribe would like 24-hour operations at the Ports of Piegan and Del Bonita. They expect this would enhance economic development.

- **Desire to Attract and Better Manage Tourist Traffic**

There is a significant volume of tourist traffic through the Reservation in the summer. There is considerable interest in enhancements such as information and interpretive centers.

There are conflicts between tourist uses and truck uses for the roads. One suggestion was to try and separate tourist and truck traffic.

- **Concern About Preservation and Maintenance**

The participants believe that the BIA has insufficient funds for maintaining roads on the Reservation. Winter maintenance (plowing) is especially problematic.

- **Desire for Safety Monitoring and Improvements**

The participants want information about safety and accidents on the Reservation. There is particular concern about the potential for strong winds to physically blow rail-cars off the rail tracks near Browning.

- **Desire for a General Aviation Airport near Browning**

The Blackfeet are exploring the feasibility of developing a general aviation airport to serve the Reservation.

- **Need for Improvements to Access Recreation Areas on the Reservation**

Participants believe that improved access is needed to fishing and boating lakes on the Reservation. Currently, several unimproved roads service the lakes. They are, however, experiencing increased use, and think that a single paved access road may be needed.

C. THE FLATHEAD RESERVATION, CONFEDERATED SALISH AND KOOTENAI TRIBES

The Tribal Council of the Confederated Salish and Kootenai Tribes and their planning staff raised the following issues for consideration in the planning process:

- **Importance of Meaningful Involvement Based On Sovereignty**

The Confederated Salish and Kootenai should not be treated merely as an interested public organization or a jurisdiction. They are a sovereign government and the public involvement process and the actions of the MDT should be based upon this. The Tribes want to participate but in a meaningful way that results in their issues being addressed.

- **Concern about the Safety and Management of Highway 93**

The Tribes identified a number of issues that need to be addressed as part of planning for, and management of Highway 93. These include: lowering speed limits in Pablo and Elmo, access management to regulate the number and spacing of approaches, and wider shoulders. They suggested examining parallel routes for moving farm equipment and consideration of providing separate bicycle/pedestrian paths for children and families. The Tribes expect these issues to be addressed if right-of-way is to be granted.

From the Confederated Salish and Kootenai's perspective, safety is one of the most significant issues in the corridor. Therefore, interim solutions to safety problems should be addressed. Availability of money should not dictate safety improvements because a life is worth more than money. Pedestrian safety is a primary concern and the Tribes suggested that a pedestrian over/underpass would improve safety.

- **Need to Address Tribes' Cultural Concerns**

The economic and social impacts on Tribes ought to be considered in corridor planning and improvements. Part of this should include provisions for working with Tribes if buried cultural sites are encountered during construction. The tribes were also concerned about long-term cultural impacts when major transportation arterials are routed through the reservations.

- **Desire to Address Cumulative Environmental Impacts**

The issue was raised regarding the consideration of cumulative environmental effects of improvements on: water quality, wildlife corridor crossings, protection of sensitive

plants and wildlife species. The tribes were also concerned about hazardous waste transport and overall air quality and transportation impacts on non-attainment areas. The Tribes believe that these should be addressed.

- **Importance of Addressing Indian Contract Preference Issues**

The Tribe emphasized the importance of resolving the outstanding disagreement between MDT and tribal governments with respect to TERO issues concerning Indian contract preference.

- **Desire to See Tribes Receive Suballocation of Enhancement Monies**

By dispersing Enhancement monies to counties and not to Reservations, the Tribal Council believes that the sovereignty of Tribal Governments is being ignored. The Tribe wants a direct suballocation of Enhancement monies.

- **Inadequate Funding For Maintenance**

The Tribal Council considers present funding levels are grossly inadequate for maintaining the existing road system on the Reservation. Poor design and location of many routes requires reconstruction for which funding is also limited.

- **Disagreement with Functional Reclassification**

In April 1993, the Tribes submitted proposed changes for the reclassification of Reservation roads to the State. The State did not follow many of the Tribes' recommendations when submitting their recommendations to congress. The Tribes would like this reclassification to be reconsidered.

- **Desire for Participation in Priority Setting and Programming**

The Tribal Council wants to know how their priorities will be addressed in the programming process. They want the opportunity to have input in the final selection process.

- **Desire for Involvement in the Lake County Transit Study**

The Tribes are interested in being involved in this study. Specific issues they are interested in include: the study of carpooling, vanpooling, bicycle facilities and bus systems.

- **Examine ways to increase commodity movement by rail**

The MDT could consider alternative modes for transporting commodities such as wood chips which are currently hauled by truck. This could improve safety and help preserve roads.

- **Interest in MDT's scenic byways feasibility study**

The tribes are interested in scenic byway issues related to the reservation.

D. THE CROW RESERVATION, THE CROW TRIBE

The Chair of the Crow Tribal Government and her professional staff identified the following transportation issues:

- **Desire for an Improved Working Relationship with MDT and Direct Suballocation of Funds**

Clara Nomee, Chair of the Crow Tribe, is eager for improved communication with the State. However, the Tribe will be monitoring the progress of the statewide plan to determine the extent to which their issues are addressed.

Currently, some state money and services are allocated directly to the counties. The Tribe argues that because 90 percent of Big Horn County's population is on the Crow Reservation, money should be allocated directly to the Reservation and not Big Horn County. The very poor condition of Pryor Road is cited as an example of the need for this approach, in order to ensure adequate maintenance takes place.

One of the long-range goals of the Tribe is to become more self sufficient. As this happens, the Tribe would like to assume more road responsibilities. To allow this to happen, the Crow want a program developed to train Native Americans to take over road maintenance.

- **Need to Ensure Adequate Infrastructure to Support Economic Development**

The Crow have embarked on a number of capital investments to improve the economy and provide health services on the Reservation. These include a large casino development and a planned museum. If successful, these will increase infrastructure needs.

- **Concern About the Absence of Passenger Transportation to Billings**

The participants noted the Powder River bus service crosses, but does not make stops on the Reservation. They believe there is a need for intercity bus service between the Reservation and Billings. This is particularly important for tribal members without access to automobiles who need specialized medical and other services in Billings.

- **Belief that there is a High Priority Need for Airport Development on the Reservation**

The Tribe received federal funds to build a medical facility to provide specialized medical services to the Native American population in the region. To ensure effective utilization of this facility, emergency air service access is needed. The Federal Aviation Administration (FAA) recently undertook a study to determine the preferred site for an airstrip within the County. The Tribe has formally objected to the site selection process because it did not include consideration of a site on the Reservation. The Tribe strongly maintains that the FAA should expand the study to consider all potential airport sites. The Tribe believes that in addition to serving the medical facility, location of any new air facility on the Reservation would better serve the population of the area.

- **Concern About Highway Maintenance**

The Tribe is concerned about the poor condition of many roads on the Reservation. Highway 212 in particular, was noted as being in a bad state of repair and a safety hazard. The poor conditions are exacerbated because all projects on Highway 212 are held up pending resolution of the job preference issues with the State.

Maintenance on local and county roads is also a problem for the Tribe. There is concern that maintenance simply will not take place. Yellowstone County recently terminated their maintenance agreement for the Pryor Road, and now the Tribe is concerned about who will continue the maintenance program.

- **Desire for Signage Indicating Reservation Borders**

The Crow would like to place welcome signs at the Reservation borders. They point out that because of tribal sovereignty, they want a sign indicating the Reservation boundary in equal prominence to the "Welcome to Montana" sign, and preferably before that sign.

E. FORT BELKNAP RESERVATION, ASSINIBOINE AND GROS VENTRE TRIBES

Four Tribal Council members and John Healy, the tribal transportation planner, identified the following issues:

- **Desire to Access Federal and State Funding**

The Tribal Council's primary concern is to determine their eligibility for funding projects through existing state and federal funding programs. The tribal transportation planner pointed out that ISTEA only recognizes the Tribes through the Indian Reservation Roads (IRR) system for which funding is available through the BIA. The Tribes would like, however, to be eligible for other federal and state funds.

- **Need for Increased Passenger Transportation Services**

The Tribes would like to see an increase in intra-state air services. In addition, they would like expanded AMTRAK services along the Hiline. The reservation is lacking a reliable bus service to Havre. The Tribes suggested some type of van or shuttle service for the public transportation dependent residents. Transporting the sick and elderly is particularly problematic given their low tolerance for lengthy journeys.

- **Recognition that the Existing Highway System is Adequate**

The participants believe Montana has an adequate highway system. MDT should concentrate on maintaining the current road network before any additional money is spent on new roads. The Tribes expect to benefit from any upgrading to MT 66 from US 2 to the junction with US 191. This would improve connections to Billings.

- **Expectation of Increased Traffic Due To NAFTA**

As a result of NAFTA and increased tourism, the Tribes expect there will be an increase in traffic through Fort Belknap. To service existing traffic levels, the Tribes would like to see more rest areas in their region. In addition, they want the existing rest areas maintained during the winter.

- **Desire for Increased Coordination with MDT**

The Tribal Council suggested working closely with their planning staff to address transportation planning issues. They also suggested MDT involve all tribal planners on a transportation committee. The tribe would like to see increased coordination between their council, the county commissioners and MDT's District Engineer. The Tribes are interested in having Native American representation on the Highway/Transportation Commission.

F. FORT PECK RESERVATION, ASSINIBOINE AND SIOUX TRIBES

No Tribal Council members were present at this meeting. The Tribes were represented by a tribal planner. Local elected officials had been invited to the meeting by the tribes. Two County Commissioners attended the meeting. The issues raised reflect "transportation concerns in northeast Montana".

Following were the issues raised in Wolf Point:

- **Need for Intercity Passenger Transportation Options**

Wolf Point and other communities in northeast Montana are geographically isolated. At present, intercity transportation options are limited to the automobile and air transportation. Due to the large distances, participants would like to see more reliable and affordable alternatives for travel to Billings, Great Falls and other regional centers. They believe the only feasible option is for intercity bus or van passenger transportation. The need is expected to increase as the population of public transportation dependent residents increases.

- **Interest in the Potential for State Subsidy for Intercity Bus Service**

The participants would like to see an intercity passenger service connecting Wolf Point with other Montana cities, especially Billings. Given that air service is subsidized, the participants questioned whether it would be possible to subsidize bus service. Subsidies could be given to help operators service smaller communities.

- **Importance of Maintaining Subsidized Air Service to Points in Northeast Montana**

Participants recognize the importance of commercial-scheduled air service to their communities' economies. For personal travel, it provides a reliable connection, especially in the winter, but for most trips it is prohibitively expensive.

Some air passengers in the northeast part of the State are travelling to Williston, North Dakota or even Regina to board planes. The Wolf Point community would like to find a way to keep those airport boardings inside the State.

- **Desire for Improved AMTRAK Service**

The AMTRAK service along the Hiline is important to the region. Currently, Montana has good east/west connections, but the State is still lacking in adequate north/south routes. The participants are concerned that the number of communities

with AMTRAK service is declining. Among the suggestions raised was retaining, at a minimum, "flag stops" in communities between the major stations.

- **Concern that the Highway Speed Limit Is Too Low**

The participants expressed concern that the 55 miles per hour speed limit on the primary and secondary roads in Eastern Montana is too low.

- **Need for Improvements to Highway 2**

The participants believe that United States Highway 2 (US 2) along the entire Hilina is in a state of disrepair. Construction projects are not keeping up with the needs along this route. Further, they anticipate the demand on US 2 will increase. The development and maintenance of US 2 is considered essential for tourist trade.

- **Importance of a Coordinated Planning Process**

The participants believe MDT needs to recognize the differences between Tribal Governments in undertaking multijurisdictional planning. It is important to note the Fort Peck Reservation has a "checkerboard" of land ownership patterns, 45 percent of the population on the Reservation is non-Indian and this is different than on other Reservations. Therefore, MDT should work with all of the regional players, the cities, counties, and the tribes as part of a coordinated planning process.

G. NORTHERN CHEYENNE RESERVATION, NORTHERN CHEYENNE TRIBE

Five representatives from the Tribe, including two council members, attended this meeting. They raised the following issues:

- **Need to Increase Safety**

The Tribe would like to see an increase in the level of safety on the road system. They believe that a safety-related evaluation of the entire US 212 corridor through the Northern Cheyenne Reservation is needed.

The Tribe identified several specific safety improvement projects for MDT to undertake. These include:

- Widening several approaches to improve safety.

- Providing additional school bus signs along US 212. This is needed because travellers on US 212 often do not expect the school buses to stop.
- Improving selected intersections, where it was reported that over 20 fatal accidents have occurred, by installing yellow warning lights or a 4-way stop sign.

- **Need to Provide Better Weed Spraying Services**

The participants believe the State needs to provide a better weed spraying service on US 212 because many of the weeds that were introduced through highway projects along this corridor have spread onto private ranch lands.

- **Concern About Pavement Conditions and Maintenance on US 212**

The participants believe US 212 is in desperate need of better maintenance. The general disrepair of the road, including the potholes, have become a problem for travellers. The Tribe is also dissatisfied with MDT's winter maintenance program. The reservation roads should be plowed in a more timely fashion. The Tribe suggests MDT hire a tribal member to maintain roads on the Northern Cheyenne Reservation. The Tribe would also like the State to repair and better maintain the existing right-of-way fencing along US 212. In addition, because as both the Northern Cheyenne and the State agree that the Reservation is open range, the State needs to take responsibility for maintaining and installing cattle guards on US 212. The Tribe would like better signing along US 212 to mark specific locations and road intersections. For example, they would like a sign at the Muddy Creek intersection and at the Birney/Sheridan intersection.

- **Importance of Improved Passenger Services**

Currently, there are no intercity bus stops in Lame Deer although intercity services pass through the Reservation. Lame Deer has received Section 16 funding for a van from the State, but there is a need to identify additional mechanisms for serving the transportation dependent.

The closest airport is in Colstrip (20 miles north). The Reservation needs a fixed-wing airport. Air emergency service is available from Billings, but it is expensive.

- **Desire for Enhanced Interjurisdictional Coordination**

The Tribal Government would like to better understand how MDT manages the transportation system. It was suggested a brochure or a guide to "using the MDT"

would be helpful. The Tribe would like the State to appoint an Indian representative to the Highway/Transportation Commission and other related boards.

- **Concern About Motor Carrier Movements**

The Tribe would like their own weigh station in Lame Deer. They are looking into purchasing a portable weigh station to patrol the trucks that are using US 212. The Tribe would like a better understanding of the hazardous materials transported across the Reservation.

- **Desire for a Suballocation of CTEP Funds**

The Tribal Government representatives believe MDT should have allocated CTEP funds directly to the Reservations, rather than having the Reservations work through the counties. The State should have used the same method to allocate Enhancement funds that are used to allocate funds through the IRR program.

H. ROCKY BOYS RESERVATION, THE CHIPPEWA AND CREE TRIBES

Members of the Chippewa and Cree Tribes' Council raised the following issues:

- **Desire for Policy-level Involvement in TranPlan 21 and the Continuous Planning Process**

Tribal Council members believe they should participate at a decision-making level in the development of the statewide transportation plan. In particular, the Tribe's goals and priorities should be incorporated in the process. They would like to be notified in advance of Steering Committee meetings.

- **Expect Tribal Sovereignty to be Acknowledged by the Planning Process**

The planning process should respect sovereignty. Planning and programming processes should not involve Tribal Governments on the same level as local jurisdictions.

- **Desire Funding Mechanisms and the Funding of Improvements on the Reservation to be Addressed**

The Tribal Council is interested in the potential for Enhancements on the Reservation and the potential for the use of surface transportation program funds. Funds for maintenance on the reservations roads are very limited and used only for emergencies. Consequently there is an acute need for funding.

- **Supporting Economic Development Through Transportation is a Major Priority**

The Tribal Council explained that many of their economic development concerns are similar to those in adjacent areas, off the Reservation. The Tribes are interested in any potential for benefitting from increases in international trade as a result of NAFTA.

- **Interested in the Potential For Supporting Economic Development through Tourism**

In particular, the Tribes believe that there are opportunities for tying the Native American perspective into tourism development and scenic byways. The tribes have built a lodge and operate a ski area which is a recreational destination with associated transportation needs.

- **Tribal Council Members Questioned Whether Transportation Needs Should Be Put Ahead of Social Needs**

The Tribal Council questioned whether it reflected the right values to make investments in improved transportation facilities, when many citizens do not have the resources to use the facilities or once they get to service centers to pay for the medical and other services they are seeking. The implication is that basic social needs should be met before improving the transportation system.

- **Identified Special Needs for Connectivity into the State and National Transportation System**

The Tribal Council pointed out that they are isolated from the major service centers in the State. For access to Billings they are dependent on essential air service from Havre. They are concerned about the future viability of that service.

IV. Written and Oral Comments



In addition to the input from the public meetings, MDT received written comment from thirteen individuals and/or organizations. All were initially invited to a focus group meeting and could not attend or provided written comment in addition to their comments at the meeting. To date there have been 26 calls on the TranPlan 21 hotline.

A. WRITTEN COMMENT

The following summarizes the written comments received.

1. General Comment

- Montana should make an effort to avoid the mistakes of other states and not focus entirely on roadways.(1)
- Montana's demography requires an approach to transportation infrastructure that is different to that of other states.(1)
- A comprehensive inventory of all existing transportation infrastructure is needed to determine the system's most critical weaknesses. This includes passenger and freight transportation facilities and services.(1)
- Work towards improving intermodal connections between public transportation modes.(1)
- It will be difficult to find the funds to maintain Montana's existing transportation system now and in the future.(1)
- Transportation facilities and services in eastern Montana are losing ground. However, there will be little change in the system between now and 2015.(2)
- The distribution of funds between eastern and western Montana does not provide the eastern part of the state with its fair share.(2)
- Safety, in particular the safety of school children, is an important issue that needs to be addressed both in terms of the design of facilities and through education. There is a need for coordination of education programs.(6)
- Consider nonmotorized forms of transportation, including horses.(7,9)

- Protect the wildlife populations in the state and keep their travel corridors functional if necessary through wildlife overpasses or other features.(9)
- Consider the impact of transportation decisions on communities and quality of life.(12)
- The public should be educated about the impacts of transportation decisions.(12)
- Provide information on transportation options to the public.(12)
- Whenever federal regulations prevent reasonable solutions to transportation problems, work with other states and the congressional delegation to remove these barriers.(13)

2. Transportation Planning

- Planning needs to recognize the geographic diversity of the state.(2)
- Use advisory committee structure for decision-making.(7)
- Change current CTEP fund distribution approach. Let a statewide advisory committee distribute the funds and use a portion of the funds for state level projects.(7)
- Provide access to recreational facilities.(7)
- Consider a 50 year planning horizon.(11)
- Make the organizational structure of MDT accessible and understandable to the public.(11)
- Establish a system of "environmental accounting" to track and publicize MDT's record with regard to wetland, wildlife, and other environmental impacts.(11)
- Ensure that all parts of MDT understand and support the new multimodal approach.(12)
- Develop methods for optimizing the trade-off between system improvements and the demand created by them and plan for the appropriate level of demand.(13)
- Look at the life-cycle costs of transportation improvements, including their environmental and energy efficiency, and review current design practices for appropriateness.(13)

- Place conditions for funding on local communities to increase transportation system efficiency.(13)
- Identify areas in which other agencies affect the transportation system and encourage them to help increase its efficiency.(13)
- Propose a more efficient method for allocating funds across Montana.(13)
- Identify non-construction projects which would facilitate more efficient use of the transportation system.(13)

3. Highway Issues

- MDT should increase capacity only when needed and take a close look at funding for primary and secondary road maintenance costs.(1)
- In rural northeastern Montana the highway system is generally in fair condition. There is adequate access to major highways, although widening of a section of Highway 16 south of Sidney would be desirable.(3)
- Limited funding will make it difficult for MDT to accommodate growth in the western part of the state while maintaining the road system in eastern Montana where it may be necessary to transfer some facilities to local maintenance.(4)
- Highway funds should be distributed fairly throughout the state.(5)
- Work with the Montana Department of Fish, Wildlife, and Parks on maintenance and upgrade of state park roads and on adequate signing of state park facilities along highways.(7)
- State roads heavily impacted by cross-border traffic should get more state and federal attention and funds, especially if the traffic does not benefit the area.(8)

4. Public Transportation

- There is not enough coordination of intercity bus and rail service in the state.(1)
- Work to meet the needs of the elderly and disabled in a daily basis.(1)
- Improve passenger rail service to meet some intercity demand with rail.(1)

- Work to improve connections between different public transportation modes and provide information on schedules. Ensure that intermodal passenger facilities with ADA.(1)
- Improve passenger rail service and facilities in the state.(1)
- Promote car pooling and the use of public transportation to improve air quality and reduce dependence on foreign oil.(1)
- There is a lack of access to intercity bus, rail, and air service in the eastern part of the state. However, people who live in this part of the state know that driving long distances to get to any destination is the price for living there.(3)
- MDT should continue its efforts to provide public transportation services to the elderly and disabled, although increased funding will be necessary to meet needs.(3)
- Public transportation in Montana will thrive only if fuel prices rise significantly.(4)
- Eastern and northeastern Montana need some kind of bus service in particular for the elderly.(8)
- Explore joint use of school buses and/or putting school kids on public transportation. Investigate potential changes in legislation which might be required.(8)
- Make public transportation an integral part of the future transportation system. Make it efficient, attractive, and safe.(12)

5. Rail

- Montana is not likely to gain increases in rail service. (4)
- Consider the deteriorating condition of the Canadian rail system in freight movement planning.(8)
- Work on improving the harsh operating environment for rail in the state.(8)

6. Nonmotorized Issues

- MDT should not waste resources to expand bicycle and pedestrian facilities when roadway needs cannot be met.(4)
- Consider the interests of bicyclists in highway planning and promote bicycle trails, lanes, and laws not only for local bicyclists but also for tourist bikers.(10)

7. Air Transportation Issues

- Air service will continue to concentrate at Billings, Bozeman, Great Falls, and Missoula airports and the planning process should address highway access improvements to these facilities.(4)
- There is no need to expand general aviation programs or provide additional navigation aid for other airports.(4)
- Explicitly contradicting the above comment, this points out the need to maintain a viable general aviation infrastructure for the state.(5)
- Continued federal funding of essential air service is critical for Montana.(8)
- Work with the Department of Commerce to interest carriers in implementing service to Canadian cities and the West Coast.(8)

8. Funding

- Aviation fuel tax increases given to MDT's Aeronautics Division should, in their lion's share, be returned as grants to the larger airports that have generated them.(4)
- Contradicting the above comment, this statement indicated that the fuel tax was instituted for the express purpose of maintaining expanding general aviation programs. The general aviation community asked for a self-imposed tax to ensure that needed programs can be carried out.(5)
- The general public shows concern for increased taxation.(7)

9. Freight

- Encourage freight from Canada using rail terminals in northern Montana to go on rail closer to the border and try to get a higher portion of the traffic on rail.(8)
- Work to eliminate the unfair advantages of canadian trucks:
 - Work with Alberta and Saskatchewan to get uniform truck standards for Montana and the two provinces.
 - U.S. truckers should not have to pay worker's compensation on both sides of the border if the canadian truckers do not have to.
 - Canadian trucks should pay federal use tax on U.S. highways.
 - Heavier Canadian trucks allowed into Shelby should be limited to one destination - the transloading facility.(8)
- Establish a shipping advocate at MDT. That person would work with the ICC and federal agencies and help local shippers in trying to preserve facilities.(8)

B. ORAL COMMENTS FROM THE TRANPLAN 21 HOTLINE

1. General Issues

- Consider cooperation with other agencies to address specific issues, e.g. the tourist people.

2. Transportation Planning Issues

- Take a long-range look at transportation needs - use 50 instead of 20 years. Take into consideration the linkage between land use and transportation planning and the fact that current land use patterns are unsustainable and work towards sustainability.

3. Highway Issues

- One caller was adamantly opposed to the expansion of Highway 93 because it would increase air quality problems.
- Two callers indicated that eastern Montana needs at least one more paved north/south route. Gravel would be acceptable if it is properly maintained. Both mentioned the Terry-Brockway route as an issue.

4. Public Transportation Issues

- Transit systems should be made more convenient and, at least in the Bitterroot, have park-and-ride lots. There should be provisions to enable people to take bicycles on the bus.

5. Rail Issues

- Consider using rail lines for commuter trains in particular to connect Butte, Anaconda, Deerlodge, Whitehall, and possibly Bozeman.
- Two callers would like the southern passenger rail line reestablished.
- Consider bus access to train stations.

6. Air Transportation Issues

- Establish a system of heliports.

7. Nonmotorized Transportation Issues

- Consider bicycle paths along highways, in particular along Highway 12 and from Great Falls to Helena.
- Consider changes to the pedestrian crossings policy on federal-aid highways in downtown Bozeman.
- Consider bicycle accommodation at the outset of projects and not as an expensive add-on.

8. Funding

- Charge bicyclists for use of highways.
- Eastern Montana does not get its fair share of transportation funds.
- MDT should lobby the legislature to secure highway trust fund monies for transportation. Diversions/borrowing from the fund should stop.

Appendix A

Public Involvement Process Documentation



Appendix A

Public Involvement Process Documentation

1

Public Involvement Process Documentation



The following documents the public involvement process for TranPlan 21, Montana's first statewide multimodal transportation plan. The public involvement process has four elements:

Stage 1: Issue Identification. This provides the opportunity for early input to identify the issues to be addressed by the plan.

Stage 2: Review and Comment on Alternative Strategies and Actions. This involves enabling the public to evaluate alternative strategies and actions.

Stage 3: Comment on the Draft of the Plan. This provides information and opportunity for public input on the draft plan.

Ongoing: On-going Public Information Activities and Opportunities for Comment. This includes a variety of different mechanisms. These allow for public input and comment throughout the development of the plan, including presentations to local community groups and organizations.

A. MDT PUBLIC INVOLVEMENT GOALS

MDT's public involvement process provides citizens, affected providers of transportation, and other interested parties, with the opportunity to comment during early stages and later key stages of the plan's development. This includes special consideration to coordinating with the three Metropolitan Planning Organizations (Billings, Great Falls, and Missoula) and the concerns of local governments and the seven Indian tribal governments with sovereignty over lands in Montana (Crow, Northern Cheyenne, Fort Peck Tribes, Blackfeet, Rocky Boy Tribes, Fort Belknap, and Confederated Salish and Kootenai).

The goal for this process is to support the initial development of Montana's long-range, multimodal, statewide transportation plan.

MDT believes effective public involvement at the planning level reduces the potential for future controversy and ultimately results in a better statewide transportation system. Through this public involvement process the MDT is committed to:

- Supply the public and stakeholder groups with timely information to encourage informed discussion on issues and options.
- Providing adequate opportunity for input at key stages in the plan's development.
- Honest consideration of all input in the decision-making process.

B. STAGE I: PUBLIC INPUT INTO ISSUE IDENTIFICATION

This component of the public involvement process provides the early opportunity for broad-based input for TranPlan 21 to identify transportation issues to be addressed by the plan. The issue involved the following activities:

1. Public Open Houses

A public open house was held in each of the MDT districts, with an additional meeting in District 1:

<u>District</u>	<u>City</u>	<u>Location</u>	<u>Date</u>
District 1	Missoula	City Hall	1/25/94
District 2	Kalispell	City Hall	1/26/94
District 3	Butte	B-SB Public Library	1/18/94
District 4	Great Falls	Civic Center	1/19/94
District 5	Miles City	Miles Community College	2/8/94
District 6	Billings	Yellowstone County Courthouse	2/10/94

Each meeting was held between 3:00 and 7:00 p.m. to allow for afternoon and evening attendance. The meetings were publicized in the media and through MDT's newsletter. Advertisements were placed in the following newspapers:

<u>Newspaper</u>	<u>Publication Dates</u>
Billings Gazette	2/6/94 and 2/10/94
Helena Independent Record	1/16/94 and 1/18/94
Missoulain	1/23/94 and 1/25/94
Kalispell Daily Interlake	1/23/94 and 1/25/94
Great Falls Tribune	1/16/94 and 1/19/94
Montana Standard	1/16/94 and 1/18/94
Miles City Star	2/4/94 and 2/7/94
Bozeman Daily Chronicle	1/16/94 and 1/17/94
Livingston Enterprise	1/17/94
Farm & Ranch	2/2/94

Press releases were sent to the following:

RADIO	NEWSPAPERS
Bozeman	Billings
Helena	Glendive
Butte	Miles City
Great Falls	Kalispell
Kalispell	Missoula
Missoula	Great Falls
Glendive	Butte
Miles City	Helena
Billings	Bozeman
	Livingston

Participants were informed about TranPlan 21 and their role in the planning process through a short slide presentation which was held twice throughout the four-hour meeting. The slides were supplemented through a series of boards illustrating the planning process. Roundtable discussions in small groups following the presentations provided an opportunity for all participants to voice their concerns about the transportation system and perceived current and future needs and opportunities. In addition, a short questionnaire allowed participants to identify their priorities for all modes.

2. Statewide Focus/Target Group Meetings

A series of focus group meetings with representatives of agencies and organizations with specific transportation interests included representatives of:

- Metropolitan Planning Organizations and urban areas.
- Commercial trucking, freight rail, air freight, and intermodal interests.
- Passenger rail, air, and transit interests, including the elderly and persons with disabilities.
- Bicycle and pedestrian interests and environmental organizations.
- State and federal resource agencies, including but not limited to the Departments of Fish, Wildlife, and Parks; Natural Resources and Conservation; State Lands; Historic Preservation; Commerce; the Forest Service; Environmental Protection Agency; Corps of Engineers; and the Federal Highway Administration.

Participants for these meetings were invited by mail and through follow-up phone calls. The invitation letter included a list of key issues related to each interest area designed to facilitate the discussion. A more detailed slide show informed participants about TranPlan 21 and federal planning requirements reflected in the new planning process. This was followed by a roundtable discussion.

3. Tribal Meetings

All tribal governments are being provided with the opportunity to participate in the planning process. Meetings have been scheduled with representatives of the seven tribal governments on each of the reservations. An initial presentation was provided at a meeting involving all the tribes. Following the roundtable meeting format, they focus on issues particular to the tribal lands in the state.

4. Media Releases

In addition to advertisements announcing the public open houses, press and radio releases were prepared and distributed across the state. MDT staff gave one radio and TV interview at one of the open houses.

5. Other Opportunities for Early Input

In addition to these activities carried out, the public had access to on-going information and comment opportunities by phone and mail.

C. STAGE 2: REVIEW AND COMMENT ON ALTERNATIVE STRATEGIES AND ACTIONS

A second round of public meetings will be conducted to enable the public to evaluate alternative strategies and actions designed to address the issues that were identified during the initial public involvement process. The public will be able to review and comment on different sets of strategies and actions that set alternative priorities for TranPlan 21 and identify those that should be considered in the preparation of the plan. The public will also have the opportunity to review and comment on different types of public involvement measures that could be used in the future as part of the continuous planning process.

At a minimum, there will be:

- A series of six open houses in the same communities where meetings were held during Stage 1, plus three additional locations (Helena, Glasgow and Havre).
- A series of six focus group meetings involving the same groups of transportation interests as those in Stage 1.
- A series of meetings with representatives from each tribal government.
- Opportunities to review and comment by telephone and mail.
- A statistically significant (at the 95 percent confidence level) survey of Montanans to solicit comment on the potential policy recommendations.

D. STAGE 3: COMMENT ON THE DRAFT PLAN

The goal of this public involvement effort will be to inform the public about the draft transportation plan and to provide opportunity for comment on the plan. The draft will be made available early enough to allow for an adequate review and comment period and consideration of these comments in the final plan.

At a minimum, the following public involvement activities will be carried out:

- Opportunities to review and comment by mail and telephone.
- Individuals and organizations on the TranPlan 21 mailing list will be notified that the plan is available for review and comment.
- Copies of the overview of the draft plan will be distributed to: all individuals and organizations that participated in or were invited to the focus group meetings and anyone else requesting the document.
- Copies of the draft plan overview will be distributed to public libraries.
- Newspaper ads will be placed in major newspapers announcing the availability of the plan.

E. ONGOING PUBLIC INFORMATION AND OPPORTUNITY FOR COMMENT

TranPlan 21's public involvement includes a variety of ongoing mechanisms for public input. This section describes the sources of information and opportunities for comment available to the public throughout the development of TranPlan 21.

1. TranPlan 21 Hotline

The hotline, 1-800-714-7296, is in operation throughout the development of TranPlan 21. Its purpose is to enable citizens to comment on the plan or MDT activities in general or to request information on the plan.

2. Statewide MDT Newsletter Inserts

In time before the first round of public meetings, MDT sent out the first issue of its newsletter, *Newsline*. The newsletter will be published throughout the planning process and is designed to inform and educate the public about planning activities and opportunities for involvement and to solicit comment. Currently, MDT's mailing list includes more than 3500 names, representing all modes, all levels of state and local government, various transportation, economic, social, and environmental interests. Participants of all public open houses could request to be added to the mailing list.

3. Electronic Bulletin Board

MDT's special studies section will monitor the state's electronic bulletin board for transportation planning issues and inquiries and respond as appropriate. The telephone number is 444-5648.

4. News Releases

In addition to the information made available to press and radio stations before the first round of public meetings, there will be news releases at strategic stages of the development of TranPlan 21. At a minimum, the media will be briefed about different strategies and actions for TranPlan 21 and the draft of the plan and its availability for public comment.

F. PUBLIC INVOLVEMENT TEAM

Following MDT staff and consultants undertook the public involvement:

- John Craig Chief Multimodal Planning Bureau
- William Cloud Supervisor, Special Studies Section
- Lisa Moisey Planner, Special Studies Section
- William Dye President, Dye Management Group, Inc.
- David Rose Senior Manager, Dye Management Group, Inc.
- Christine Wolf Senior Consultant, Dye Management Group, Inc.

Appendix B

Public Involvement Questionnaire Results



Appendix B

Public Involvement Questionnaire Results

12

Summary of Open Houses Questionnaire Responses

How important are the following transportation issues?

N = 103*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Ability to use modes other than the car	51	24	20	1		3
- Costs of moving goods and people	35	51	14			
- Effect of different types of transportation on energy consumption	42	37	17	2		2
- Effect transportation choices have on communities and community concerns	50	33	15	1		2
- Considering adequate access to transportation for everybody throughout Montana	34	37	21	2	2	4
- Impact of population decline in eastern Montana	17	17	43	15	7	2
- Impact of population growth in western Montana	52	21	20	2	1	3
- Impact transportation has on the economy	52	30	11	1	1	5
- Impact of transportation choices on the environment	47	40	10	2	1	1
- Impacts of tourism on the transportation system	44	29	23		2	2
- Need for new funding sources for transportation	37	37	19	1	3	3
- Safety of transportation users	58	32	9			1
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Summary of Open Houses *(continued)*

Questionnaire Responses

How important are the following highway issues?

N = 103*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Build new roads	12	22	39	22	1	4
- Good access to freeway ramps	15	35	33	14	1	3
- Good signage	28	46	20	1		5
- Pave more roads	22	21	36	17		3
- Prevent and fix potholes	41	44	13			3
- Prevent congestion	38	39	15	4		5
- Prevent/clean up litter	23	43	31	1		2
- Safety	71	25	3			1
- Speedy snow removal	26	49	17	5		3
- Use technology to allow better use of existing roadways	44	38	11	2	2	4
- Well-spaced and clean freeway rest areas	26	28	36	7		3
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Summary of Open Houses (*continued*)

Questionnaire Responses

How important are the following pedestrian/bicycle facilities issues?

N = 103*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Adding new bicycle/pedestrian paths	44	24	18	9	4	1
- Aesthetically pleasing pedestrian/bicycle paths for recreation in urban areas	31	29	25	9	4	2
- Direct pedestrian/bicycle paths in urban areas ON major roads for commuting and to activity centers like schools and malls	22	25	27	17	2	7
- Direct pedestrian/bicycle paths in urban areas SEPARATED from major roads for commuting and to activity centers like schools and malls	39	21	26	8	3	3
- Preservation and use of abandoned rail lines for trails	37	28	25	8		2
- Paths along major freeways	18	22	28	23	3	5
- Recreational trails in rural areas	17	30	36	14	2	1
- Safety of bicyclists, pedestrians	64	24	8	2		2
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Summary of Open Houses (*continued*)

Questionnaire Responses

How important are the following public transportation issues?

N = 103*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service in rural areas	24	36	26	13		1
- Bus service to rail	24	34	29	11	1	1
- Coordinate schedules for easy transfers	31	37	21	7	1	3
- Encourage ridesharing	33	38	20	6		3
- Expand transit service	37	29	25	5	1	3
- Improve bus terminals	18	37	30	9	2	4
- Service between cities in Montana	34	43	17	5		1
- Service for the elderly/disabled	56	32	10	1		1
- Transit in urban areas	50	25	15	6	1	3
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Summary of Open Houses *(continued)*

Questionnaire Responses

How important are the following air transportation issues?

N = 103*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service to airports with commercial service	28	38	17	13	1	4
- Good road access to airports	27	46	20	4		3
- More general aviation airports	5	13	42	30	4	7
- Regular service to other parts of the country	33	44	17	4		2
- Regular service between Montana's cities	29	44	19	5		3
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Butte Open House Questionnaire Responses

How important are the following transportation issues?

N = 10*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Ability to use modes other than the car	50	30	20			
- Costs of moving goods and people	20	60	20			
- Effect of different types of transportation on energy consumption	50	20	20	10		
- Effect transportation choices have on communities and community concerns	40	40	20			
- Considering adequate access to transportation for everybody throughout Montana	40	40	20			
- Impact of population decline in eastern Montana		10	60	20	10	
- Impact of population growth in western Montana	40	20	30			10
- Impact transportation has on the economy	80	10	10			
- Impact of transportation choices on the environment	20	60	20			
- Impacts of tourism on the transportation system	60	20	20			
- Need for new funding sources for transportation	20	60			10	10
- Safety of transportation users	40	30	30			
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Butte Open House (*continued*)

Questionnaire Responses

How important are the following highway issues?

N = 10*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Build new roads	10	10	30	20	10	20
- Good access to freeway ramps	30	40	10	10		10
- Good signage	60	10	10	10		10
- Pave more roads	10	30	30	20		10
- Prevent and fix potholes	40	30	20			10
- Prevent congestion	30	40	10	10		10
- Prevent/clean up litter	40	30	20			10
- Safety	60	20	10			10
- Speedy snow removal	20	50	10	10		10
- Use technology to allow better use of existing roadways	20	40	20			20
- Well-spaced and clean freeway rest areas	20	40	20	10		10
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Butte Open House (continued)

Questionnaire Responses

How important are the following pedestrian/bicycle facilities issues?

N = 10*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Adding new bicycle/pedestrian paths	30	30	40			
- Aesthetically pleasing pedestrian/bicycle paths for recreation in urban areas		30	70			
- Direct pedestrian/bicycle paths in urban areas ON major roads for commuting and to activity centers like schools and malls	20	10	60	10		
- Direct pedestrian/bicycle paths in urban areas SEPARATED from major roads for commuting and to activity centers like schools and malls	30	10	50		10	
- Preservation and use of abandoned rail lines for trails	40	40	20			
- Paths along major freeways	10	20	30	40		
- Recreational trails in rural areas	10	30	30	30		
- Safety of bicyclists, pedestrians	60	20	20			
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Butte Open House (*continued*)

Questionnaire Responses

How important are the following public transportation issues?

N = 10*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service in rural areas	30	20	30	10		10
- Bus service to rail	20	30	30	10		10
- Coordinate schedules for easy transfers	10	40	50			
- Encourage ridesharing	10	40	30	10		10
- Expand transit service	30	10	50		10	
- Improve bus terminals	30	40	20	10		
- Service between cities in Montana	40	30	30			
- Service for the elderly/disabled	60	30	10			
- Transit in urban areas	30	40	20	10		
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Butte Open House (*continued*)

Questionnaire Responses

How important are the following air transportation issues?

N = 10*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service to airports with commercial service	20	40	10	20		10
- Good road access to airports	30	50	10			10
- More general aviation airports	10	10	50	10		20
- Regular service to other parts of the country	40	40	20			
- Regular service between Montana's cities	30	50	10			10
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Great Falls Open House

Questionnaire Responses

How important are the following transportation issues?

N = 17*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Ability to use modes other than the car	29	41	24	6		
- Costs of moving goods and people	47	47	6			
- Effect of different types of transportation on energy consumption	41	41	12	6		
- Effect transportation choices have on communities and community concerns	29	59	6	6		
- Considering adequate access to transportation for everybody throughout Montana	29	29	24	6		12
- Impact of population decline in eastern Montana	6	29	53		6	6
- Impact of population growth in western Montana	29	35	29	6		
- Impact transportation has on the economy	47	47			6	
- Impact of transportation choices on the environment	41	47	6	6		
- Impacts of tourism on the transportation system	24	41	35			
- Need for new funding sources for transportation	29	41	18		6	6
- Safety of transportation users	41	53	6			
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Great Falls Open House (continued)

Questionnaire Responses

How important are the following highway issues?

N = 17*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Build new roads		41	53	6		
- Good access to freeway ramps	6	41	41	12		
- Good signage	18	65	18			
- Pave more roads		41	35	18		6
- Prevent and fix potholes	35	59	6			
- Prevent congestion	6	47	41	6		
- Prevent/clean up litter	12	41	47			
- Safety	59	35	6			
- Speedy snow removal	24	47	29			
- Use technology to allow better use of existing roadways	35	41	18	6		
- Well-spaced and clean freeway rest areas	24	41	35			
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Great Falls Open House (*continued*)

Questionnaire Responses

How important are the following pedestrian/bicycle facilities issues?

N = 17*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Adding new bicycle/pedestrian paths	18	35	29	18		
- Aesthetically pleasing pedestrian/bicycle paths for recreation in urban areas	18	47	24	12		
- Direct pedestrian/bicycle paths in urban areas ON major roads for commuting and to activity centers like schools and malls		24	41	35		
- Direct pedestrian/bicycle paths in urban areas SEPARATED from major roads for commuting and to activity centers like schools and malls	29	24	29	18		
- Preservation and use of abandoned rail lines for trails	12	29	53	6		
- Paths along major freeways	6	24	35	35		
- Recreational trails in rural areas	6	18	53	24		
- Safety of bicyclists, pedestrians	41	53	6			
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Great Falls Open House (*continued*)

Questionnaire Responses

How important are the following public transportation issues?

N = 17*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service in rural areas		59	29	12		
- Bus service to rail	12	24	35	29		
- Coordinate schedules for easy transfers	24	24	35	18		
- Encourage ridesharing	12	53	24	12		
- Expand transit service	24	24	35	18		
- Improve bus terminals	41	41	18			
- Service between cities in Montana	24	53	12	12		
- Service for the elderly/disabled	41	41	12	6		
- Transit in urban areas	35	29	24	12		
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Great Falls Open House (continued)

Questionnaire Responses

How important are the following air transportation issues?

N = 17*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service to airports with commercial service	18	24	29	29		
- Good road access to airports	18	53	24	6		
- More general aviation airports		24	41	29	6	
- Regular service to other parts of the country	18	71	12			
- Regular service between Montana's cities	12	53	35			
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Missoula Open House Questionnaire Responses

How important are the following transportation issues?

N = 24*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Ability to use modes other than the car	88	8	4			
- Costs of moving goods and people	25	46	29			
- Effect of different types of transportation on energy consumption	54	38	8			
- Effect transportation choices have on communities and community concerns	54	38	8			
- Considering adequate access to transportation for everybody throughout Montana	42	29	21		8	
- Impact of population decline in eastern Montana	13	17	38	13	17	4
- Impact of population growth in western Montana	75	13	13			
- Impact transportation has on the economy	42	33	17	4		4
- Impact of transportation choices on the environment	67	29	4			
- Impacts of tourism on the transportation system	38	33	29			
- Need for new funding sources for transportation	38	38	21	4		
- Safety of transportation users	63	33	4			
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Missoula Open House (continued)

Questionnaire Responses

How important are the following highway issues?

N = 24*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Build new roads	4	17	46	33		
- Good access to freeway ramps	8	29	38	21	4	
- Good signage	17	46	33			4
- Pave more roads	17	17	46	21		
- Prevent and fix potholes	29	54	17			
- Prevent congestion	54	33	4	4		4
- Prevent/clean up litter	17	42	38	4		
- Safety	58	38	4			
- Speedy snow removal	33	33	25	8		
- Use technology to allow better use of existing roadways	50	33	4	4	4	4
- Well-spaced and clean freeway rest areas	25	13	58	4		
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Missoula Open House (continued)

Questionnaire Responses

How important are the following pedestrian/bicycle facilities issues?

N = 24*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Adding new bicycle/pedestrian paths	63	29	4		4	
- Aesthetically pleasing pedestrian/bicycle paths for recreation in urban areas	25	42	17	13		4
- Direct pedestrian/bicycle paths in urban areas ON major roads for commuting and to activity centers like schools and malls	33	38	4	13		13
- Direct pedestrian/bicycle paths in urban areas SEPARATED from major roads for commuting and to activity centers like schools and malls	38	21	33	4		4
- Preservation and use of abandoned rail lines for trails	58	21	21			
- Paths along major freeways	29	29	17	17	4	4
- Recreational trails in rural areas	13	38	50			
- Safety of bicyclists, pedestrians	79	17	4			
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Missoula Open House (*continued*)

Questionnaire Responses

How important are the following public transportation issues?

N = 24*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service in rural areas	46	33	13	8		
- Bus service to rail	46	38	13	4		
- Coordinate schedules for easy transfers	63	33	4			
- Encourage ridesharing	58	38	4			
- Expand transit service	71	21	8			
- Improve bus terminals	29	46	21			4
- Service between cities in Montana	46	42	4	4		4
- Service for the elderly/disabled	71	21	8			
- Transit in urban areas	79	17		4		
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Missoula Open House *(continued)*

Questionnaire Responses

How important are the following air transportation issues?

N = 24*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service to airports with commercial service	38	50	4	4		4
- Good road access to airports	17	38	38	4		4
- More general aviation airports	4	8	42	42		4
- Regular service to other parts of the country	29	33	29	4		4
- Regular service between Montana's cities	33	29	21	13		4
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Kalispell Open House Questionnaire Responses

How important are the following transportation issues?

N = 28*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Ability to use modes other than the car	50	32	14			4
- Costs of moving goods and people	32	61	7			
- Effect of different types of transportation on energy consumption	32	46	21			
- Effect transportation choices have on communities and community concerns	57	18	21			4
- Considering adequate access to transportation for everybody throughout Montana	29	39	21	4		7
- Impact of population decline in eastern Montana	11	21	50	18		
- Impact of population growth in western Montana	86	14				
- Impact transportation has on the economy	43	36	14			7
- Impact of transportation choices on the environment	54	43	4			
- Impacts of tourism on the transportation system	57	21	14			7
- Need for new funding sources for transportation	39	32	25		4	
- Safety of transportation users	64	21	14			
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Kalispell Open House (*continued*)

Questionnaire Responses

How important are the following highway issues?

N = 28*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Build new roads	25	21	25	21		7
- Good access to freeway ramps	18	32	29	21		
- Good signage	36	43	18			4
- Pave more roads	25	21	39	11		4
- Prevent and fix potholes	43	46	11			
- Prevent congestion	54	29	11	4		4
- Prevent/clean up litter	39	39	21			
- Safety	82	18				
- Speedy snow removal	32	57	7	4		
- Use technology to allow better use of existing roadways	54	43	4			
- Well-spaced and clean freeway rest areas	29	32	25	11		4
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Kalispell Open House (continued)

Questionnaire Responses

How important are the following pedestrian/bicycle facilities issues?

N = 28*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Adding new bicycle/pedestrian paths	75	14	11			
- Aesthetically pleasing pedestrian/bicycle paths for recreation in urban areas	68	14	14	4		
- Direct pedestrian/bicycle paths in urban areas ON major roads for commuting and to activity centers like schools and malls	36	29	21	7		7
- Direct pedestrian/bicycle paths in urban areas SEPARATED from major roads for commuting and to activity centers like schools and malls	68	11	21			
- Preservation and use of abandoned rail lines for trails	50	39	7	4		
- Paths along major freeways	29	32	29	4	4	4
- Recreational trails in rural areas	36	36	29			
- Safety of bicyclists, pedestrians	82	11	7			
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Kalispell Open House (*continued*)

Questionnaire Responses

How important are the following public transportation issues?

N = 28*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service in rural areas	25	32	29	14		
- Bus service to rail	25	46	25	4		
- Coordinate schedules for easy transfers	32	46	11	7		4
- Encourage ridesharing	39	32	21	7		
- Expand transit service	39	32	25			4
- Improve bus terminals	21	39	25	7		7
- Service between cities in Montana	39	50	11			
- Service for the elderly/disabled	64	18	14			4
- Transit in urban areas	54	32	11			4
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Kalispell Open House (continued)

Questionnaire Responses

How important are the following air transportation issues?

N = 28*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service to airports with commercial service	36	50	11	4		
- Good road access to airports	29	61	7	4		
- More general aviation airports	11	7	50	25	4	4
- Regular service to other parts of the country	36	46	11	7		
- Regular service between Montana's cities	32	54	11	4		
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Miles City Open House Questionnaire Responses

How important are the following transportation issues?

N = 11*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Ability to use modes other than the car	9	27	55			9
- Costs of moving goods and people	55	36	9			
- Effect of different types of transportation on energy consumption	9	36	36			18
- Effect transportation choices have on communities and community concerns	55	18	18			9
- Considering adequate access to transportation for everybody throughout Montana	64	27	9			
- Impact of population decline in eastern Montana	82	9	9			
- Impact of population growth in western Montana		27	55			18
- Impact transportation has on the economy	73	9			9	9
- Impact of transportation choices on the environment	18	18	36	9	9	9
- Impacts of tourism on the transportation system	64	9	18		9	
- Need for new funding sources for transportation	55	36				9
- Safety of transportation users	55	36				9
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Miles City Open House (*continued*)

Questionnaire Responses

How important are the following highway issues?

N = 11*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Build new roads	18	36	27	18		
- Good access to freeway ramps	9	45	27			18
- Good signage	18	45	18			18
- Pave more roads	91		9			
- Prevent and fix potholes	64	18				18
- Prevent congestion	9	55	18			18
- Prevent/clean up litter		45	45			9
- Safety	82	18				
- Speedy snow removal	9	73	9			9
- Use technology to allow better use of existing roadways	36	45	9			9
- Well-spaced and clean freeway rest areas	9	36	45			9
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Miles City Open House (continued)

Questionnaire Responses

How important are the following pedestrian/bicycle facilities issues?

N = 11*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Adding new bicycle/pedestrian paths		9	36	27	18	9
- Aesthetically pleasing pedestrian/bicycle paths for recreation in urban areas		9	36	18	27	9
- Direct pedestrian/bicycle paths in urban areas ON major roads for commuting and to activity centers like schools and malls		18	36	9	18	18
- Direct pedestrian/bicycle paths in urban areas SEPARATED from major roads for commuting and to activity centers like schools and malls	9	27	9	18	18	18
- Preservation and use of abandoned rail lines for trails		9	36	36		18
- Paths along major freeways		9	27	45		18
- Recreational trails in rural areas		18	27	36	9	9
- Safety of bicyclists, pedestrians	27	27	9	18		18
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Miles City Open House *(continued)*

Questionnaire Responses

How important are the following public transportation issues?

N = 11*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service in rural areas	27	45	27			
- Bus service to rail	18	45	36			
- Coordinate schedules for easy transfers	9	45	27			18
- Encourage ridesharing	9	36	36			18
- Expand transit service	9	36				18
- Improve bus terminals	9	27	36	9	9	9
- Service between cities in Montana	27	36	36			
- Service for the elderly/disabled	45	45	9			
- Transit in urban areas	9	9	45	9	9	18
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Miles City Open House *(continued)*

Questionnaire Responses

How important are the following air transportation issues?

N = 11*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service to airports with commercial service	18	27	36	9		9
- Good road access to airports	36	36	18	9		
- More general aviation airports		18	36	27		18
- Regular service to other parts of the country	36	36	18	9		
- Regular service between Montana's cities	36	36	18	9		
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Billings Open House Questionnaire Responses

How important are the following transportation issues?

N = 13*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Ability to use modes other than the car	54	8	31			8
- Costs of moving goods and people	38	54	8			
- Effect of different types of transportation on energy consumption	62	23	15			
- Effect transportation choices have on communities and community concerns	54	31	15			
- Considering adequate access to transportation for everybody throughout Montana	8	62	31			
- Impact of population decline in eastern Montana	8	8	38	38	8	
- Impact of population growth in western Montana	23	31	31	8	8	
- Impact transportation has on the economy	62	23	15			
- Impact of transportation choices on the environment	46	46	8			
- Impacts of tourism on the transportation system	23	46	23		8	
- Need for new funding sources for transportation	38	23	38			
- Safety of transportation users	77	23				
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Billings Open House (continued)

Questionnaire Responses

How important are the following highway issues?

N = 13*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Build new roads	8	8	54	31		
- Good access to freeway ramps	23	31	46			
- Good signage	31	54	15			
- Pave more roads	8	15	38	38		
- Prevent and fix potholes	46	31	23			
- Prevent congestion	46	46	8			
- Prevent/clean up litter	23	62	15			
- Safety	85	15				
- Speedy snow removal	23	38	23	8		8
- Use technology to allow better use of existing roadways	46	23	23		8	
- Well-spaced and clean freeway rest areas	46	15	23	15		
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Billings Open House (continued)

Questionnaire Responses

How important are the following pedestrian/bicycle facilities issues?

N = 13*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Adding new bicycle/pedestrian paths	23	31	15	23	8	
- Aesthetically pleasing pedestrian/bicycle paths for recreation in urban areas	31	31	23	8	8	
- Direct pedestrian/bicycle paths in urban areas ON major roads for commuting and to activity centers like schools and malls	23	15	31	31		
- Direct pedestrian/bicycle paths in urban areas SEPARATED from major roads for commuting and to activity centers like schools and malls	23	46	15	15		
- Preservation and use of abandoned rail lines for trails	31	23	31	15		
- Paths along major freeways	15		38	31	8	8
- Recreational trails in rural areas	23	31	15	23	8	
- Safety of bicyclists, pedestrians	62	31	8			
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Billings Open House (*continued*)

Questionnaire Responses

How important are the following public transportation issues?

N = 13*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service in rural areas	8	23	38	31		
- Bus service to rail	8	8	54	23	8	
- Coordinate schedules for easy transfers	15	31	31	15	8	
- Encourage ridesharing	38	31	23	8		
- Expand transit service	15	54	15	15		
- Improve bus terminals	15	15	46	15	8	
- Service between cities in Montana	15	31	38	15		
- Service for the elderly/disabled	38	62				
- Transit in urban areas	62	23	8	8		
- Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Billings Open House (continued)

Questionnaire Responses

How important are the following air transportation issues?

N = 13*

Responses in Percent**	Very Important %	Important %	Somewhat Important %	Not Important %	Don't Know %	No Answer %
- Bus service to airports with commercial service	23	15	23	23	8	8
- Good road access to airports	46	23	23			8
- More general aviation airports		15	23	38	15	8
- Regular service to other parts of the country	46	31	15			8
- Regular service between Montana's cities	31	38	23			8
Other						
1.						
2.						
3.						

* Note: Not all participants completed a questionnaire.

** Note: Percentages in row may not add up to 100 due to rounding.

Appendix C

Written Comment



Written Comment



- 1) National Association of Railroad Passengers, letters from Mr. Robert Stevens and Mr. Barry Green

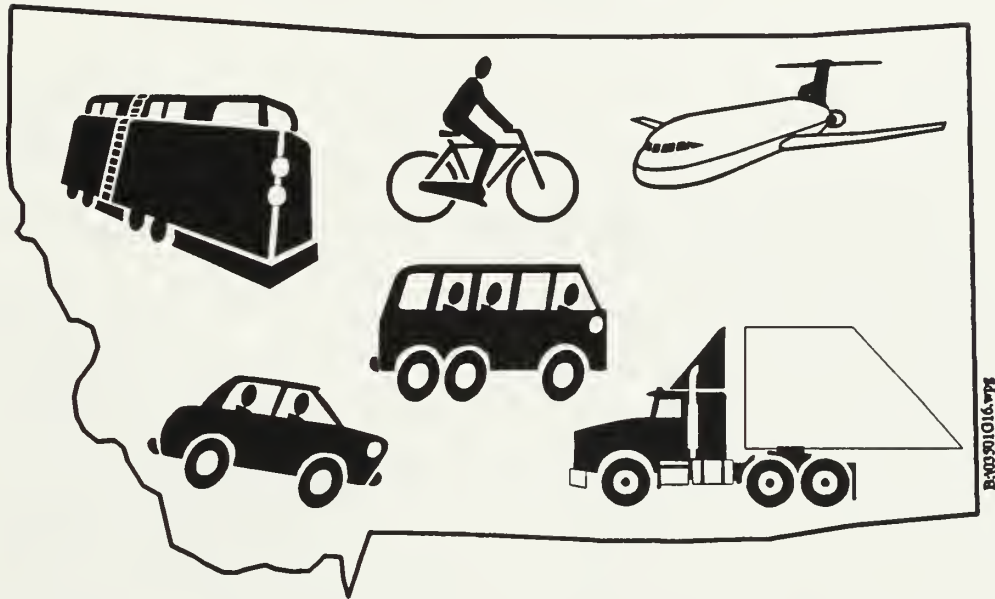
Submissions:

- A Public Transportation Mission Proposal for the Montana Department of Transportation, dated 11/25/92 (The memo was originally sent to Governor Racicot shortly after he was elected. Mr. Stevens considers it still relevant.)
 - Get America on Track, a publication by the Campaign for New Transportation Priorities, a project of the National Association of Railroad Passengers
 - Executive Summary of the Phased Implementation Program Plan for the Railroad Passenger Service Improvement in the State of Washington, prepared for the National Association of Railroad Passengers by Washington ARP, Rail Planning Committee
- 2) Fergus County Council on Aging, letter from Mr. Willy Rimby, Transportation Advisory Board Member
 - 3) Roosevelt Medical Center & Nursing Home in Culbertson, letter from Ms. Vickie Grimsrod
 - 4) Gallatin Airport Authority, letter from Mr. Ted Mathis, Airport Manager
 - 5) Montana Pilots' Association, letter from Mr. R.D. Lipscomb, President
 - 6) Office of Public Instruction, Ms. Mary Larango, letter from Traffic Education Specialist
 - 7) Montana Department of Fish, Wildlife, and Parks, letter from Mr. Bob Walker, State Trails Program Coordinator
 - 8) Montana Citizens Freight Rate, letter from Mr. Viggo Anderson
 - 9) Alliance for the Wild Rockies, letter from Ms. Angela Coffin
 - 10) Letter from Mr. Henry R. Harrington

- 11) Letter from Mr. Cedron Jones
- 12) Citizens for a Better Flathead, letter from Ms. Judy Cornell and Mr. Bruce Boody
- 13) DNRC, letter from Mr. Van Jamison
- 14) Salish-Kootenai Tribes, Letter

Montana Department of Transportation

TranPlan 21



Public Comment on Plan Alternatives, Policy Choices

prepared by

DYE MANAGEMENT GROUP, INC.

**Montana Department of Transportation
TranPlan 21
Public Comment On Plan Alternatives, Policy Choices**

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Appendices

 Appendix A: Public Involvement Checklist Results

 Appendix B: Written Comment

Plan Alternatives, Policy Choices

PUBLIC COMMENT SUMMARY



The following summarizes the results of public comment on plan alternatives and policy choices developed for TranPlan 21, Montana's statewide transportation plan. The summary draws conclusions that reflect the overall sentiment expressed through discussion, input, and checklists completed at a series of public meetings held in Billings, Butte, Glasgow, Great Falls, Havre, Helena, Miles City, and Missoula, five stakeholder focus groups, and presentations to the tribal governments. It provides information on both the preferred plan alternatives and policy choices.

Many individuals expressed strong feelings about individual elements of the policy papers and modal areas. They are described in detail in this document together with written comment that was provided. To maximize public involvement, a telephone survey of 700 Montanans was undertaken to obtain input on the plan alternatives and a number of the policy choices. The results of the survey are presented elsewhere.

A. PLAN ALTERNATIVES

Most Montanans want to maintain current levels of mobility by increasing travel options where cost-effective and improving intermodal connections. There was also support for preservation of the current system and limited new multimodal and intermodal initiatives.

B. POLICY CHOICES

1. Roadways

- Respondents requested that MDT change its current procedures and establish priorities for:
 - Preservation of the highway system.
 - Safety and other improvements.

- Capacity expansion.
- There was also strong support for prioritizing system preservation and maintenance and the preservation of right-of-way in growing corridors.

2. Economic Development

- Montanans placed great emphasis on ensuring that the transportation system supports economic development and supported all policies and actions working towards this goal.
- In particular, they asked MDT to:
 - Work with commercial air carriers to maintain existing levels of service.
 - Coordinate with Canadian authorities.
 - Provide signage for tourism-related activities and minimize billboards.

3. Freight Mobility

- There was general support for improvements to freight mobility by truck and rail.
- Respondents were particularly interested in making sure that:
 - Freight corridors are addressed by regional and local planning.
 - Montana's border crossing needs are met.
- MDT was urged to take action to preserve threatened branch rail lines. However, participants were not quite sure about the proper approach. They did not like the idea of spending state funds for financial support of threatened lines, purchase of right-of-way or rail cars but would like MDT to:
 - Work with the railroad industry to facilitate preservation of branch lines.
 - Retain existing rights-of-way in rail corridors.
- Participants want MDT to encourage the use and increase the performance of existing intermodal facilities, in particular truck/rail reload facilities.

4. Access Management

- Montanans thought that MDT needs to change its access management approach and regulate highway access further.
- They supported strengthened access controls in fast growing areas and development and implementation of a comprehensive access management plan.
- Participants were less sure, however, about funding travel forecasting that would support an access management program.

5. Land Use

- Montanans strongly supported better coordination of land use and transportation planning. In particular, they would like:
 - MDT to work with local jurisdictions to establish a consistent approach.
 - Developers to pay for the traffic demands they generate.
 - Legislation supporting land use planning in fast-growing counties.

6. Public Transportation

- In general, participants supported actions to increase use of public transportation systems. They were not quite sure, however, whether it is appropriate to spend state dollars on transit.
- Many were uncertain about or outright opposed to the idea of allowing transit projects to compete for highway funds.
- Montanans wanted to preserve existing intercity public transportation service and gave MDT a mandate to work with Amtrak to coordinate increased use of rail and preservation of existing service levels.
- Though generally supportive, they were less sure about the need for improved services for the elderly and people with disabilities and the feasibility of transportation demand management in Montana.

7. Bicycle and Pedestrian

- While generally supportive, Montanans were somewhat uncertain about the need for efforts to enhance the role of bicycles and walking and bicycle-related facility improvements.

C. SUBSTANTIVE ADDITIONS TO THE PLAN SUGGESTED BY THE PUBLIC

The following summarizes additional policy areas and recommendations for the plan suggested by the public. Not every individual suggestion is listed, rather, those made by a number of participants are presented.

1. Passenger Rail

- Participants in a number of communities believed that Montana should be actively involved in initiating efforts to introduce passenger rail service across the southern part of the state. They believe that TranPlan 21 has been too ready to dismiss this alternative as not financially feasible. They suggested that at a minimum the state's interest in a southern route should be presented as part of any national passenger rail discussions.

2. Environmental Issues

- Participants suggested that more prominent consideration be given to environmental considerations in planning for the transportation system.

3. State Leadership in Urban Areas

- Many participants believe that the state should have greater involvement in ensuring that there are alternatives to single-occupant vehicles in urban areas. This includes the state taking more responsibility for ensuring a greater provision of bicycle and pedestrian facilities, transit, and transportation demand management programs in the urban areas.

I. INTRODUCTION



Montana Department of Transportation (MDT) is preparing the State's first multimodal transportation plan (TranPlan 21). This report presents the results of public involvement undertaken to obtain public comment on the plan alternatives and policy choices addressed by TranPlan 21. It is organized into the following sections:

- Section I. Introduction.** - This describes the purpose of the public involvement and the approach that was taken.
- Section II. Open House Results.** - This provides a summary of the public comments made at the open houses across the state.
- Section III. Focus Group Results.** - This provides a summary of the comments received from focus groups of transportation providers and users.
- Section IV. Tribal Governments' Comments.** - This section documents the comments made by the tribal governments.
- Section V. List of Written Submissions.** - This section lists the written submissions received.
- Appendix A. Public Involvement Checklist Results.** - This appendix includes the results from the checklist used to facilitate public involvement.
- Appendix B. Written Comments Received.** - This appendix includes copies of the written comment on the plan alternatives and policy choices.

A. PURPOSE

The purpose of the public involvement was to continue MDT's dialogue with citizens and transportation interests in Montana to identify their preferred plan alternatives and policy choices. The goal was to involve Montanans in determining the priorities for the future of the state's transportation system. The public involvement was designed to allow public comment before the decisions are made by using public input to help choose between the different policy options under consideration for inclusion in TranPlan 21, Montana's first multimodal transportation plan.

B. APPROACH

To solicit comment from citizens and transportation interests and providers, MDT developed a visually appealing and easily accessible document summarizing the plan's policy choices. The document summarized technical work and the more detailed policy papers. These documents were widely disseminated and a variety of different opportunities for comment were provided. Public involvement opportunities included:

1. Public Open Houses

A series of nine open houses for the general public were held in Butte, Great Falls, Glasgow, Havre, Helena, Missoula, Kalispell, Billings, and Miles City. The meetings were publicized in the media and through MDT's newsletter. Participants were informed about TranPlan 21 plan alternatives and policy choices and the importance of their comments through a short 35 millimeter slide presentation which was made twice throughout the four-hour meeting. All participants were provided with the opportunity to voice their priorities and concerns. In addition, a short checklist (See Appendix A) allowed participants to individually define their priorities. The meetings were moderately well attended compared to the initial issue identification open houses.

2. Statewide Focus/Target Group Meetings

A series of roundtable meetings were held in Helena with representatives of agencies and organizations with specific transportation interests. These included:

- Representatives of Montana's Metropolitan Planning Organizations (MPOs) and urban areas.
- Freight and intermodal interests.
- Public transportation interests.
- Bicycle, pedestrian, and environmental interests.
- State and federal resource agencies.

Participants at these meetings were invited by mail for a discussion about their specific interests. The invitation letter for each meeting included the plan alternatives document and the six TranPlan 21 policy papers. A 35 millimeter slide presentation informed participants about TranPlan 21. This was followed by a roundtable

discussion. Invited individuals not able to attend the meeting in Helena were sent a follow-up letter requesting input.

3. Tribal Meetings

A series of presentations outlining the plan alternatives and policy choices were made to the seven tribal governments. Tribal governments provided oral comment and detailed written comment.

4. TranPlan 21 Hotline and Electronic Bulletin Board

In addition to these meetings, MDT provided a 1-800 number (1-800-714-7296) which has been used by citizens unable to attend the meetings. The hotline will be in operation throughout the development of TranPlan 21 to enable citizens to comment on the plan or request information. In addition, the State Electronic Bulletin Board System (444-5648) was available as a mechanism for citizens to provide input.

5. Newsletter

The September edition of MDT's Transportation Newslite Newsletter included a schedule of open houses, a description of the public involvement process, and a brief outline of some of the policy choices. The newsletter was sent to over 3,500 Montanans, including elected officials, stakeholders and interested citizens.

6. Written Comment

MDT also received written comment from transportation interests in the state as documented in Appendix B.

II. OPEN HOUSE MEETING RESULTS



In the fall of 1994, the Montana Department of Transportation conducted nine open houses throughout the state. They were held in the following locations: Billings, Butte, Glasgow, Great Falls, Havre, Helena, Kalispell, Miles City, and Missoula. The open houses were designed to obtain public input on policy choices under consideration for TranPlan 21. This section summarizes comment received during the open house meetings. The individual comments provided are listed. Participants in the open houses were also provided the opportunity to complete a checklist to record their policy choices. The checklists are tabulated in Appendix A.

A. BILLINGS - Open House

Sixteen individuals attended the open house. Affiliations were not identified on the sign-in sheet, but there were citizens from the communities of Pryor, Lavina, and Billings.

Eleven individuals completed checklists. However, not all individuals remarked on every point. The following provides a summary of the checklist results, written comment, and discussion during the meeting.

1. Plan Alternatives

a. Checklist Results

- Maintaining the current levels of mobility by increasing travel options where cost-effective and improving intermodal connections was the alternative nine respondents favored.
- There was strong opposition (seven respondents) to maintaining the status quo through continuing current transportation policies in Montana.

b. Comment and Discussion

- Long-range planning is important to meet the needs of a growing population.
- Prioritizing user demands, environmental protection, and improvement costs must be considered by TranPlan 21.
- The fuel tax should be explored as a mechanism of equitable funding for future improvements.
- There is a need to coordinate between local jurisdictions, tribes, state, and Bureau of Indian Affairs.

2. Policy Choices

a. Roadways

(1) Checklist Results

- The majority of respondents in Billings wanted to see MDT establish priorities for roadway improvements. They particularly supported the following priorities:
 - Preserving Montana's highway system.
 - Safety improvements.
 - Capacity expansions.
 - Other improvements.
- Many thought that Montana's highway infrastructure should be modernized and considered right-of-way preservation in growing corridors important.

(2) Comment and Discussion

- Concern was expressed that county-maintained roads currently fall through the funding cracks.

b. Economic Development

(1) Checklist Results

- All policies and action items received majority support, none were opposed.
- The two action items receiving support by (virtually) all respondents were:
 - Work with commercial air carriers to maintain existing levels of service (11), and
 - Work with shippers and private providers to identify access improvements (9).

(2) Comment and Discussion

- There are infrastructure needs aside from new highway construction that must be addressed in order to support economic development.
- Billboards should be eventually eliminated. Change over to highway kiosks.

c. Freight Mobility

(1) Checklist Results

- The majority of respondents were in support of ensuring freight mobility on Montana's highways. MDT should:
 - Prioritize improvements in key corridors.
 - Address impediments to efficient freight movement on freight highway corridors.
 - Work with local and regional planners.
 - Address border crossing needs.
- Although respondents generally supported actions to preserve freight rail, there was a considerable amount of uncertainty about some action items. The group did agree that MDT should:
 - Work with the railroad industry to facilitate the preservation of threatened branch lines, and

- Address priority grade separation needs at busy railroad crossings.
- Preserving threatened branch lines, providing financial support, and funding improvements in key freight corridors were action items not supported by the majority of respondents.

(2) Comment and Discussion

- Concern about the lack of uniformity of size and weight regulations on trucks that move between Montana and Canada.
- In eastern Montana branch lines are used primarily for grain shipments. In Montana, however, the rail industry is encouraging large terminals for unit trains and abandoning branch lines. In Nebraska the Union Pacific kept some branch lines open by coordinating loading of periodic unit trains with grain elevators on the branch lines. Is there potential for this approach in Montana?
- Encourage private sector development of truck/rail transfer facilities.
- Encourage private investment with public infrastructure support.

d. Access Management

(1) Checklist Results

- The majority of respondents at the Billings open house supported the development of a comprehensive access management plan that will:
 - Strengthen access controls in fast growing areas.
 - Establish a classification scheme for access management.

(2) Comment and Discussion

- There is a need to educate and inform the general public and local officials on land use planning issues. It will be difficult to address access management without land use planning.

e. Land Use

(1) Checklist Results

- The majority of respondents strongly supported land use planning policies and action items:
 - They believed that local jurisdictions should be encouraged to undertake land use planning to manage transportation demands.
 - They felt there was a need to enact legislation to support land-use planning in the fast-growing counties.
 - Technical assistance for local jurisdictions to undertake land use planning should be established and funded.
 - Individuals also want to require developers to pay a fee for resulting traffic demands.

(2) Comment and Discussion

- It will be important to balance the land use objectives of local communities with the State's mission of preserving the integrity and safety of Montana's highway systems.
- More comprehensive (land use) planning must be incorporated into the twenty-year plan.

f. Public Transportation

(1) Checklist Results

- The majority of the respondents wanted MDT to encourage the use of public transportation and develop promotional and educational programs. They also agreed that future highway improvements should accommodate public transportation needs. Providing funding for a public transit program received majority support, however, respondents were uncertain whether transit projects should be allowed to compete for highway funds.
- Preserving intercity public transportation services received majority support. In particular, respondents requested:
 - Cost-effective solutions.
 - The retention and expansion of Amtrak services.

- Respondents were only moderately interested in the development of a statewide transportation demand management (TDM) plan. They felt that TDM strategies should be addressed at the local level by transit providers and state agencies should develop a plan for state government.

(2) Comment and Discussion

- Public transportation is difficult to address from a statewide perspective because of the varied needs of rural and urban areas.
- Services could be improved if there were more coordination between public transportation vendors. Changes in regulations could assist with public transit needs and private transportation systems.

g. Bicycle and Pedestrian

(1) Checklist Results

- Bicycles and walking were seen as recreational, not as institutionalized modes of travel.
- Despite that, respondents were in strong support of all actions providing for the development and improvement of bicycle facilities in Montana.

(2) Comment and Discussion

- School sidewalk programs are helping to address some nonmotorized transportation issues, but urban areas should be working to identify a network of bicycle or walking routes that could fit into transportation system improvements.

B. BUTTE - Open House

Fourteen citizens attended this open house. Private business people, chamber of commerce representatives, city planners, citizens, and a reporter were present. Six participants completed the checklist. The following provides an overview of the checklist results, written comments concerning specific checklist items, and meeting discussions.

1. Plan Alternatives

a. Checklist Results

- Maintaining the current level of mobility by increasing cost effective travel options was the number one choice of Butte participants.

b. Comment and Discussion

- Local governments should have the option to levy taxes to meet increased demands. The state should provide flexibility to the local governments to address the funding needs over the next 20 years.

2. Policy Choices

a. Roadways

- The majority of respondents favored the establishment of priorities that would:
 - Preserve the highway system.
 - Implement safety and other improvements.
 - Expand capacity.
- They also supported the preservation of right-of-way in growing corridors.

b. Economic Development

(1) Checklist Results

- Respondents strongly supported all actions promoting economic development, with one exception, they were unsure about establishing a city park and rest area program.

(2) Comment and Discussion

- A city park and rest area program may produce negative impacts on the community's economic development--visitors will stay at the park and not go into town to eat or shop.
- Do not stifle business growth by limiting billboards.

- The importance of coordinating state and local planning to reinforce economic development actions was emphasized.

c. Freight Mobility

(1) Checklist Results

- Butte respondents felt the best actions to ensure highway freight mobility were to:
 - Address the impediments that affect effective movement.
 - Ensure that freight corridors are addressed by local and regional plans.
 - Ensure that border crossing needs are met.
- Respondents were very interested in preserving freight rail. They want MDT to take action to:
 - Work with the railroad industry to facilitate the preservation of branch lines.
 - Retain existing rights-of-way in rail corridors.
- The majority of the respondents supported improvements to intermodal connectivity and expanded use of existing truck/rail reload facilities.

(2) Comment and Discussion

- Maximizing the use of rail should be a policy option.
- What about north-south corridors--will NAFTA affect the makeup of rail corridors?

d. Access Management

(1) Checklist Results

- All individuals unanimously agreed that access management controls were needed to address traffic congestion in fast growing areas.
- The group also unanimously agreed the MDT should identify, expand, and reconfigure key corridors, as well as jump start access management in certain corridors that require immediate attention.

e. Land Use

(1) Checklist Results

- Butte respondents supported land use planning policies and believed the best way to accomplish this was at the local level. MDT should work with local jurisdictions to develop a consistent approach.

(2) Comment and Discussion

- How will this plan address land use on the reservations?
- Instead of creating a state fund to provide technical assistance to local jurisdictions, just give them the money.
- If legislation is enacted to address land use planning, make sure the counties are involved.

f. Public Transportation

(1) Checklist Results

- Public transportation needs should be incorporated into future highway improvements. However, Butte respondents did not want the state to provide funding for transit, nor did they want to see public transportation projects competing for highway funds.
- The majority also supported the preservation of existing intercity services and they agreed that a feasibility study should investigate unserved areas.
- Respondents want to preserve existing Amtrak services and increase use, particularly along the southern route. They believe that this should be added to TranPlan 21.
- MDT should work with other agencies to address needs of and coordinate services for social service passengers.
- Although the transportation demand management policy fell short of majority support, it also received no opposition. Most respondents were uncertain about this concept.

g. Bicycle and Pedestrian

(1) Checklist Results

- Respondents were uncertain about the role of bicycles and walking and the need for any improvements for these modes.
- There was some support for a tourist guide and the dissemination of safety information.

(2) Comment and Discussion

- One participant noted they would rather have highways, but they believe bicycle and pedestrian travel is in the future, so MDT should plan for it.

C. GLASGOW - Open House

Three people attended this meeting. They did not return checklists but made some comments:

- Secondary and county roads in the area show the impact of rail branch line loss.
- Canadian grain trucks are also impacting roads in the area.
- The State Department of Agriculture should be more involved in the transportation planning process.

D. GREAT FALLS - Open House

Sixteen individuals attended the Great Falls Open House. They included legislators, planners, business people, citizens, and special interest group representatives. Nine of the participants completed the checklist. The following overview provides a summary of the checklist results, written comments, and meeting discussions.

1. Plan Alternatives

a. Checklist Results

- Maintaining current levels of mobility was the number one choice of the Great Falls public.
- All respondents were opposed to declining service levels and a continuation of current policies.

b. Comment and Discussion

- An approach that goes beyond preservation of the existing system with its implied reduction in the level of mobility but does not make an attempt to fully maintain current levels of mobility might be most realistic.
- Fuel tax funds must be used for Montana's highway system and nothing else.

2. Policy Choices

a. Roadways

(1) Checklist Results

- All nine respondents agreed that MDT should establish priorities to preserve highways, improve safety, and expand capacity.
- Review of geometric design standards and undertaking right-of-way preservation in growing corridors also received unanimous support.

(2) Comment and Discussion

- System preservation and maintenance were concerns of this group.

b. Economic Development

(1) Checklist Results

- Great Falls citizens were very much in favor of policies and actions supporting economic development. In particular, they wanted Montana to participate in an examination of multistate trade corridors.

(2) Comment and Discussion

- Establish historic preservation and interpretation programs to encourage tourism and economic development.
- The proliferation of billboards on highway corridors is becoming the largest negative impact on tourism, the environment, and aesthetics.

c. Freight Mobility

(1) Checklist Results

- Participants want MDT and local governments to ensure efficient highway freight mobility.
- MDT should take action to preserve the existing freight rail system and:
 - Work with railroad companies to preserve branch lines.
 - Eliminate the busiest rail crossings.
 - Retain existing rights-of-way in rail corridors.
- Improving intermodal connectivity was supported by the majority of respondents. They were uncertain, however, about the state's role in providing rail cars.

(2) Comment and Discussion

- In order to provide an efficient transportation system, MDT must work with the private sector and ensure coordination.
- Before any decisions are made on branch lines, a financial analysis should be performed and criteria should be developed to ensure that any public funding would be wisely allocated.

- Work with Montana Rail Link and Burlington Northern.

d. Access Management

(1) Checklist Results

- MDT should take action to strengthen access controls in the fast growing areas, develop and implement a comprehensive access management plan that identifies corridors requiring action.
- Great Falls respondents also supported travel demand forecasting and were willing to fund this service.

(2) Comment and Discussion

- MDT must work with local authorities to make access management work.
- Access controls restrain economic development.

e. Land Use

(1) Checklist Results

- Respondents agreed that MDT should work with the local jurisdictions to undertake land use planning to effectively manage transportation demand. Establishing and funding technical assistance to local jurisdictions was also approved by the majority of participants.
- Developers should pay a fee to compensate for the increased traffic demands their developments create.
- Respondents also supported the enactment of legislation to support land use planning in fast-growing counties.

(2) Comment and Discussion

- Coordinate infrastructure improvements and planning with local planning agencies to ensure land use planning and transportation system improvements are compatible.
- Land use planning should not be undertaken by MDT.

f. Public Transportation

(1) Checklist Results

- Increased involvement with public transportation systems was supported by a majority of the participants; ensuring that highway improvements address public transportation received unanimous support.
- The option of funding transit systems with state revenues received mixed reactions, as did the proposal to allow transit to compete for highway funds.
- Preserving and expanding Amtrak services received strong support.
- Coordination among appropriate agencies was viewed as the best way to address public transportation needs for the elderly and disabled.

(2) Comment and Discussion

- Look for ways to simplify the planning process and paperwork associated with transportation planning.
- Transit needs to address scheduling in order to be more profitable--we have large buses running with no riders during many times of the day.

g. Bicycle and Pedestrian

(1) Checklist Results

- Participants in Great Falls, as in other locations, were uncertain about bicycle and pedestrian policies. There was some support for:
 - Preparation of a bicycle tourist guide.
 - Preservation of a bicycle network.
 - Establishment of an advisory committee.
 - Dissemination of bicycle safety information.

(2) Comment and Discussion

- Consider bicycle facility provisions during the development of all major roadway projects to ensure bicycle mobility is not compromised.
- Ensure that designers and engineers are knowledgeable about bicycle design standards.

E. HAVRE - Open House

Fifteen individuals attended the Havre Open House. They included the mayor, county commissioners, representatives from the chamber, retirees, and other citizens. Eleven of the participants completed the checklist. The following overview provides a summary of the checklist results, written comments, and meeting discussions.

1. Plan Alternatives

a. Checklist Results

- Preserving the current system and undertaking limited new initiatives was the number one choice of Havre participants.

b. Comment and Discussion

- It was stated that the plan should address transportation issues from a regional perspective and recognize that the state's problems and needs are diverse.
- Participants noted that people demand services, but they are often not willing to pay for them.
- How does the public know what we can afford. The public may select options that are too expensive.

2. Policy Choices

a. Roadways

(1) Checklist Results

- Respondents unanimously and strongly supported the establishment of the following roadway improvement priorities:
 - Highway system preservation.
 - Safety improvements.
 - Capacity expansions.
- They wanted MDT to focus on highway system preservation and maintenance.

b. Economic Development

(1) Checklist Results

- Respondents in Havre, as in other locations, agreed that the transportation system must support economic development. The following actions had unanimous support:
 - Work with shippers and private providers to identify access improvements.
 - Work with commercial air carriers to maintain existing levels of service.
- Participants want MDT to:
 - Coordinate with the Department of Commerce.
 - Establish a city park and rest area program.
 - Coordinate planning with Canadian authorities.
 - Prioritize tourist-related transportation enhancements.
 - Provide signage for tourism-related activities and minimize billboards.

(2) Comment and Discussion

- The federal formula for funding distribution should be changed.
- Make sure the Canadian government coordinates with Montana.
- Economic development could be enhanced by expanding Highway 2 to four lanes.

c. Freight Mobility

(1) Checklist Results

- Actions ensuring efficient highway freight mobility received most support. Participants were particularly interested in:
 - Ensuring that Montana's border crossing needs were met received the majority's support.
 - Addressing freight corridor needs at the local and regional levels.
- Working with the railroad industry to preserve branch lines and retaining right-of-way in existing rail corridors were seen as the best solutions for freight rail mobility issues.
- Have respondents were uncertain about or opposed to committing state revenues to freight rail preservation or the purchase of rail cars.
- Participants wanted to encourage use of intermodal facilities, in particular truck/rail reload facilities, and improve performance.

(2) Comment and Discussion

- Comments indicated skepticism that the state could successfully support freight rail. The following opinion was expressed, "The railroad has already pulled out of here--if they cannot make it work, how does the state expect to do it? What good is it if it can't pay its own way?"
- The opinion was expressed, that if more freight goes onto the highways because of branch line losses and lack of support, we must

maintain those roads. Roads must be designed for bigger loads to meet those needs.

- The grain industry tried in the past to provide rail cars without success. This makes state provision of cars questionable.

d. Access Management

(1) Checklist Results

- Respondents wanted MDT to retain the existing access management approach.
- However, they requested that MDT strengthen controls in fast-growing areas and identify corridors in need of reconfiguration or expansion.

e. Land Use

(1) Checklist Results

- Respondents believed that land use planning should occur at the local level and that MDT should work with local jurisdictions to establish a consistent approach. They also saw a need to fund technical assistance for local jurisdictions.
- Developers should be required to pay a fee to compensate for increased traffic demands.
- Respondents were in favor of legislation that would support land-use planning in fast-growing counties.

f. Public Transportation

(1) Checklist Results

- The Havre public supported public transportation; however, participants were unwilling to commit state funds to transit systems or allow the use of highway funds for transit projects.
- They agreed that future highway improvements must address public transportation needs.

- Preserving intercity transportation services was also supported by a majority of the respondents; the action item that received most support was to work with Amtrak to preserve existing service levels.

g. Bicycle and Pedestrian

(1) Checklist Results

- Most respondents were uncertain about or opposed to efforts to improve bicycle and pedestrian programs and facilities.

(2) Comment and Discussion

- Examine the possibility of procuring abandoned railroad lines for bike trail use.

F. HELENA - Open House

Thirty individuals attended the Helena open house. Representatives from environmental organizations, special interest groups, including bicycle advocates, citizens and four individuals from Lewistown were present. Seventeen participants completed the checklist. The following provides an overview of the checklist results, written comments, and meeting discussions.

1. Plan Alternatives

a. Checklist Results

- Participants at the Helena open house definitely wanted to see change occur, and were in strong opposition to no change in policy.
- Maintaining the current level of mobility was chosen by all respondents. There also was support for preserving the current system and limited new initiatives.

b. Comment and Discussion

- Developing a high service transportation system could become a viable goal. Funding increases may not be necessary if priorities were shifted and paradigms changed.
- Preservation of the state's secondary systems should be addressed.

- Significant increases in fuel taxes should not happen.
- Land use planning could be a cost-effective way to address transportation demand.
- Incorporate bicycle/pedestrian facilities and TDM practices into service on existing facilities.
- Paving low-volume roads is absurd. It encourages sprawl, and perpetuates the problems.
- Historic preservation stakeholders are illustrated in the flow chart, but there is no mention of historic preservation in the plan.
- There is no environmental action items incorporated into any of the policies. Make sure MDT coordinates with appropriate agencies when designing and planning new projects. Make sure erosion control, native landscaping (wild flowers), and storm water drainage needs are addressed in the plan.
- How does the Scenic Byway program fit into the proposed alternatives?
- What are the funding considerations for each Plan Alternative? Will any of the funding requirements be passed onto local governments?
- In order for any alternative to be successfully implemented, local jurisdictions must ensure that they can fulfill their responsibilities. They may, in some cases, require some technical planning assistance.
- State agencies must coordinate their efforts to ensure better planning outcomes.
- Essential air service is vitally important to Lewistown's economy and the other communities receiving subsidized service. Enplanements have risen dramatically recently and this should be reflected in planning documents.

2. Policy Choices

a. Roadways

(1) Checklist Results

- The public wanted MDT to establish priorities as follows for roadway improvements:
 - Preservation of Montana's highway system.
 - Safety and other improvements.
 - Capacity expansion.
- Respondents further supported right-of-way preservation in growing corridors and prioritization of system preservation and maintenance.

(2) Comment and Discussion

- When setting priorities, preservation, intermodal connections, and bicycle and pedestrian issues must be addressed.
- Roadway choices should involve land use planning.
- When undertaking right-of-way preservation in growth corridors historic preservation must also be addressed.
- Paving low-volume roads is unwise--it encourages sprawl and perpetuates transportation problems. There will never be enough money for long-term maintenance.
- Be selective about modernization of Montana's highway infrastructure.
- Coordination should occur between MDT and local jurisdictional planners when new projects are being developed.
- Landscaping should be addressed as an action item somewhere in the plan.

b. Economic Development

(1) Checklist Results

- Helena participants wanted to see MDT incorporate economic development concerns into its transportation planning processes as outlined in the policies and actions.
- They want MDT to work with commercial air carriers to maintain existing levels of service.

(2) Comment and Discussion

- MDT should address transportation and economic planning from a regional perspective, not a statewide one.
- In order to produce effective planning outcomes at the regional level, transportation and economic planners must have a sound understanding of the two different planning processes in order to understand how they compliment, interface, impact, and enhance the outcomes.
- When establishing a city park/rest area, incorporate local historic preservation issues into the plan. Keep rest areas open 12 months of the year.
- Develop a strategy to promote air freight.
- The economic development policies are oriented towards the exporting industries. Attention should also be placed on moving Montana-made products within the state.

c. Freight Mobility

(1) Checklist Results

- Participants supported a policy which safeguards the mobility of freight on Montana's highways. There was strong agreement that highway improvements in freight corridors must be prioritized and impediments identified. All of the respondents agreed that local and regional planners should play a key role in the strategic planning.

- Helena respondents agreed that the Montana Department of Transportation should preserve existing rail and air systems by working with the railroad industry to facilitate the preservation of branch lines.
- Addressing priority grade separation needs and retaining existing rights of way in rail corridors received strong support and no opposition.
- Participants supported actions to improve intermodal conductivity but were not in favor of state provision of rail cars.

(2) Comment and Discussion

- Not all branch rail lines should be maintained, but right-of-way should be.
- When funding improvements in key freight rail corridors, prevent negative impacts on the community. Some communities, like Helena, are already experiencing delays caused by railroads, like the Montana Avenue Crossing.
- Must do more to enhance freight movement by rail with positive returns on investment.
- The state should own rail right-of-way and track, but others should own stock and run the railroad.
- Perhaps the state could fund cooperative ownership of rail cars.
- Ensure MDT has an in-house modal expert. Considering the value of freight moving interstate, Montana's role under NAFTA, and the importance of interstate commerce policies (rail and motor carriers) on Montana's economic development, it is clear that MDT should be involved in national freight issues.
- Enable the ready transport of goods from one part of state to another.

d. Access Management

(1) Checklist Results

- Participants strongly supported strengthening access management controls, establishing a classification scheme, and developing and implementing a comprehensive access management plan.
- Respondents also agreed that certain corridors dealing with capacity concerns and access management issues should be provided with the mechanism to immediately address the pressing problems. Participants also were willing to fund travel demand forecasting to support access management decisions.

(2) Comment and Discussion

- Do not preclude access control in those areas that are not the "fastest" growing. Allow those areas the opportunity, if they wish, to participate in any new access management or corridor management programs.
- Before defining criteria and implementing the access management classification scheme, solicit local input.
- When identifying corridors needing expansions or reconfigurations, include bicycle/pedestrian traffic.
- Work with local planners and legislative bodies to plan access points for new developments.
- Look at access to non-highway and non-rail alternatives (for example recreational travel, corridors for horse, bicycle, hiking).
- Travel demand forecasting as it presently being used, is done to meet demands, not manage demands and that paradigm needs to change.

e. Land Use

(1) Checklist Results

- Respondents strongly agreed that land use planning must be a key component of a long-range transportation plan.
- MDT should encourage local jurisdictions to undertake land use planning to address transportation demand and work to develop consistent approaches.
- Participants thought that technical assistance should be funded to help local jurisdictions undertake land use planning and agreed that the state needs a defensible mechanism to levy a developer's fee to offset new traffic demands.

(2) Comment and Discussion

- Planning alone is not enough, the local jurisdiction must also implement its plans.
- A local match should be required to pay for technical planning assistance.
- The larger jurisdictions may not need financial and technical assistance--maybe just the small communities who do not have the staff expertise or revenues to conduct land use planning.
- Land use planning assistance is presently available through the Department of Commerce. Instead of creating a new program, MDT should form a partnership.
- Make sure local jurisdictions coordinate with adjacent jurisdictions. Actions in one jurisdiction impact adjacent and neighboring areas.
- Legislation requiring development impact fees should be enacted, but perhaps MDT should not take the lead. Perhaps a group like the Montana Association of Planners should take the lead; MDT could work with this group to draft legislation.
- Land use planning should be viewed from a regional perspective. Ensure communication that provides regional planning overviews,

problems, projects, and other updates. Regional leaders must be kept informed about statewide planning activities and initiatives.

- Work with local governments, other agencies, and the legislature to develop statewide land use guidelines.
- Create a policy to develop corridor plans and right-of-way capacity limits.
- Land use development follows roads and pavement. Some mechanisms need to be implemented to limit site developments and concentrate population.
- Encourage and or require metropolitan areas to have a comprehensive land use plan.

f. Public Transportation

(1) Checklist Results

- Participants generally supported efforts to facilitate increased use of public transportation systems but were unsure about the state funding of public transportation.
- Preservation of the existing intercity transportation services received support. Respondents agreed that MDT should:
 - Evaluate the feasibility of new intercity service in unserved areas.
 - Implement a rural ridesharing demonstration program.
 - Coordinate with Amtrak to facilitate the preservation and increased use of rail services.

(2) Comment and Discussion

- Develop promotional/educational programs on public transportation options in coordination with Travel Montana, which already publishes several informational/promotional documents.
- Provide state-level funding support for transit only to support local public transportation and do not limit support to those communities that already have access to it.

- MDT should take a strong lead to endorse TDM on a statewide basis, and to coordinate rural ride sharing demonstration programs.
- MDT should be working toward the introduction of a southern Amtrak route.

g. Bicycle and Pedestrian

(1) Checklist Results

- Participants supported a policy to institutionalize bicycle/pedestrian modes and wanted to make targeted bicycle-related improvements. Support for nonmotorized modes was stronger than in other locations.

(2) Comment and Discussion

- The Office of Public Instruction already has a bicycle program that addresses safety.
- When preparing a bicycle related tourist guide, a network must be identified. MDT should secure input from bicycle recreationists, local planners, chambers of commerce, Montana Travel, and other interested stakeholders. Coordinate with other agencies to develop an integrated system of trails, including long-distance routes, and develop a systematic approach (inter-agency) for acquiring abandoned rail corridors.
- Encourage driver respect for the bicyclist and pedestrian when making public service announcements.
- When making roadway improvements, review rumble strips and adjust them for easier and safer bicycle movement.
- Address bicycle/pedestrian paths during preliminary construction designs--more cost-effective.

G. KALISPELL - Open House

Planners, citizens, chamber representatives, economic development professionals, and reporters were represented. Six individuals completed the checklist. The following provides an overview of the checklist results, written comments, and meeting discussions.

1. Plan Alternatives

a. Checklist Results

- Maintaining current levels of mobility by increasing travel options was the number one choice of Kalispell respondents.

2. Policy Choices

a. Roadway

(1) Checklist Results

- The Kalispell public wanted MDT to establish priorities for roadway improvements, preserve right-of-way in growth corridors, and prioritize system preservation and maintenance.

(2) Comment and Discussion

- Prioritizing improvements for roadway systems must have a degree of flexibility to accommodate changing growth patterns and trends.

b. Economic development

(1) Checklist Results

- Respondents supported all economic development policies and actions.

(2) Comment and Discussion

- When factoring transportation planning into economic development, make sure there is involvement and cooperation from local communities.

c. Freight Mobility

(1) Checklist Results

- Respondents supported efforts to ensure efficient freight mobility on Montana's highways and improvements to intermodal connectivity but were unsure about the need for MDT to work towards preserving freight rail.

d. Access Management

(1) Checklist Results

- Participants wanted strengthened access controls in the fast-growing areas and supported the development and implementation of a comprehensive access management plan.

e. Land Use

(1) Checklist Results

- The respondents unanimously agreed that local jurisdictions should undertake land use planning. They also wanted to see a consistent approach established and supported development impact fees.

(2) Comment and Discussion

- Working with local jurisdictions to establish a consistent approach is critical.
- The state should be actively involved in land use planning and related activities.

f. Public Transportation

(1) Checklist Results

- Kalispell respondents agreed that public transportation systems should be supported and promoted, however, the state should not provide funding to transit. Allowing transit projects to compete with highway improvement funding also lacked support.
- Kalispell respondents were concerned about transit for social service passengers and agreed the best approach was coordination with other state agencies.

(2) Comment and Discussion

- They wanted to see an expansion of Amtrak services in Montana, and wanted MDT to facilitate the preservation of existing service levels and explore reactivating the southern route.
- Transportation demand management should be implemented at the local level.

g. Bicycle and Pedestrian

(1) Checklist Results

- Institutionalizing bicycle and pedestrian modes and targeted bicycle-related improvements received support.

(2) Comment and Discussion

- Coordinate with local communities. For example some towns already have bicycle trail guides, field trips/tours.
- Safety must be a prime concern for bike path design.

H. MILES CITY - Open House

Four individuals attended the Miles City open house. Residents from Miles City and Terry were present. All four respondents completed the checklist. The following provides an overview of the checklist results, written comments, and meeting discussions.

1. Plan Alternatives

a. Checklist Results

- Respondents supported maintaining current mobility levels.

2. Policy Choices

a. Roadways

(1) Checklist Results

- Respondents supported the establishment of roadway improvement priorities, modernization of the highway infrastructure, and prioritization of system preservation and maintenance.

(2) Comment and Discussion

- Needs of low volume roads should be addressed.

b. Economic Development

(1) Checklist Results

- Miles City participants supported efforts to support economic development through the transportation system.

c. Freight Mobility

(1) Checklist Results

- Respondents agreed that MDT should address highway and rail freight mobility and improve intermodal connectivity.

(2) Comment and Discussion

- Essential air service is important to the area.

d. Access Management

(1) Checklist Results

- Miles City respondents did not oppose, nor did they support any of the access management policies.

e. Land Use

(1) Checklist Results

- Land use planning policies received mixed reviews.

f. Public Transportation

(1) Checklist Results

- People in the Miles City area supported public transportation policies, preservation of intercity public transportation services, and were willing to provide funding for transit.

(2) Comment and Discussion

- B & T Transit has plans to expand bus services across Highway 2 which will connect Minot with Spokane and make connections in Miles City, Jordan, and Wolf Point.
- Having some form of access to medical services is important for Terry residents.

g. Bicycle and Pedestrian

(1) Checklist Results

- Respondents supported bicycle and pedestrian policies and wanted MDT to institutionalize these modes of travel and target bicycle-related improvements.

I. MISSOULA - Open House

Twenty-two individuals attended this open house. County officials, citizens, special interest groups, and community development representatives were present. Fifteen individuals completed the checklist. The following provides an overview of the checklist results, written comments, and meeting discussions:

1. Plan Alternatives

a. Checklist Results

- The Missoula public selected maintaining current levels of mobility as their number one choice. Development of a high service transportation system also received support.
- Respondents were opposed to declining levels of service due to a continuation of current policies.

b. Comment and Discussion

- Support new initiatives that will establish intermodal passenger transportation systems.
- Making highway improvements (more traffic lanes) will encourage more vehicle trips.
- The future availability of energy, energy conservation, and air quality should be factored into the plan.

2. Policy Choices

a. Roadways

(1) Checklist Results

- Respondents supported the establishments of priorities that would address:
 - Highway system preservation.
 - Safety and other improvements.
 - Capacity expansions.

- There was strong interest in right-of-way preservation in growth corridors.

(2) Comment and Discussion

- Establish priorities for roadway improvements where cost-effective.
- Set priorities for capacity expansions--we do not want Montana to look like California.
- Explore other alternatives besides constructing more roads.

b. Economic Development

(1) Checklist Results

- All economic development policies and actions received support, however, the non-response rate was high--at least five individuals withheld their opinions on the majority of policies and actions.
- Tourism-related signage and minimization of billboards was the action that received overwhelming support.
- Establishing a city park and rest area program received strong support.

(2) Comment and Discussion

- MDT should not be in the business of promoting tourism.
- MDT is a player and should work in concert with other agencies and communities to address economic development.
- In addition to maintaining air services in the State, Montana should be attempting to attract more commercial air carriers.
- If the city park rest area is reinstituted, there should be a statewide plan and interpretative concepts should be incorporated into rest area planning.
- Billboards distract and are detrimental to tourist trade. The state should do a better job in regulating off-premise outdoor advertising; the Montana Code should be revised to allow this to happen. If the

state cannot or is unwilling to effectively regulate, legislation should be drafted to grant authority to the counties.

- There is a need for improvements on Department of the Interior roads that connect state parks.
- There should be a mechanism to factor the need for connecting urban trails into transportation planning.
- Abandoned rail corridors should be held for trail opportunities.

c. Freight Mobility

(1) Checklist Results

- Although no major opposition surfaced regarding the freight mobility choices, the response rates were low. Interest was strongest for the following action items:
 - Preserving threatened branch lines.
 - Funding rail improvements in key corridors.
 - Retaining existing rights-of-way.
- Participants wanted to see intermodal facilities improve performance levels and increased use at truck/rail reload facilities. They did not believe that the state should provide rail cars.

(2) Comment and Discussion

- Major repairs on Montana's highways are the result of heavy truck traffic. Truck permits and fuel tax revenues do not cover the cost of maintenance.

d. Access Management

(1) Checklist Results

- The Missoula public expressed a strong interest in access management. Participants wanted to:
 - Strengthen access controls.
 - Establish a classification scheme.

- Develop and implement a comprehensive access management plan.
- They were in strong agreement that corridors experiencing safety, capacity, and development pressures should be given a jump start. The Missoula group also expressed a willingness to fund travel demand forecasting.

(2) Comment and Discussion

- Access management is a good idea for certain areas/corridors, however, a comprehensive access management plan is not needed in all parts of the state.
- The development of comprehensive plans should be done in conjunction with local jurisdictions. Funding assistance should be made available.
- Travel demand forecasting can be accomplished without increasing funding.
- MDT should take the lead and provide a planning forum for Montana's major corridors. State level leadership is necessary to bring the counties together.

e. Land Use

(1) Checklist Results

- Respondents thought that land use planning should be undertaken. All policy and action items received support. Providing authority to assess developer fees and enactment of land-use planning legislation were items that received a particularly strong showing of support.

(2) Comment and Discussion

- MDT should not be taking a leadership role in land use planning. It seems like it will place strain on the planning section. This idea may be more acceptable if the burden of responsibility can be equally distributed among other agencies.
- Funding technical assistance for local jurisdictions is already in place; it is just not utilized.

- Transportation demand is based on reactions to land use change and growth--counties/cities need to realize the need to control land use and to adhere to comprehensive plans.

f. Public Transportation

(1) Checklist Results

- Missoula participants agreed that MDT should support public transportation and provide state-level funding, however, they were unsure if transit projects should be allowed to compete with highway projects.
- There was support for state involvement with intercity bus services, but participants agreed that appropriate actions to address intercity public transportation should be identified.
- There was strong support for the rural ridesharing program and the preservation/expansion of Amtrak services.

(2) Comment and Discussion

- Improving schedules of intercity buses could increase use--scheduling is presently inadequate.
- Participants thought that service for social service passengers should be improved and would like better coordination among state agencies. They also supported transportation demand management actions.
- Participants noted that, although ridership could be higher, there is considerable public support for the transit system.
- The hours of operation of the fixed route and demand responsive systems in Missoula are a constraint for the transit-dependent.
- Participants believed that TranPlan 21 should involve establishing Amtrak service in southern Montana where the state's population lives.

g. Bicycle and Pedestrian

(1) Checklist Results

- Missoula respondents were supportive of actions and policies supporting bicycle and pedestrian travel, however, they believe that TranPlan 21 needs to go further to address bicycle and pedestrian needs. They were particularly interested in targeted improvements for bicycles and preservation of the designated bicycle network.

(2) Comment and Discussion

- Encourage local jurisdiction to address bicycle and pedestrian options--MDT's role should be that of a facilitator.
- Preparation of bicycle tourist guides should be the local jurisdiction's responsibility.
- Pedestrian facilities are not mentioned under this category--this applies to recreational and utilitarian uses.
- Recognize the regional variations: climate, urban/rural, university or non-university town.
- Intermodal connections are essential--such as bicycle racks on buses.
- Provide funding to support bicycle/pedestrian routes--include routes that parallel the highway.
- Bridge design in Missoula is important to bicycle mobility.
- Rumble strips along shoulders inhibit bicycle traffic.
- How many tourists actually use bicycles in Montana? This mode of travel may be most relevant in areas where tourists are clustered or in areas adjacent to major tourist destinations.
- Bicycle-friendly design standards should be implemented in high-demand areas only.

III. FOCUS GROUP RESULTS



This section summarizes the public comment on the plan alternatives and policy choices provided by the participants in five focus group meetings held in Helena. A number of the participants subsequently provided written comment which is reproduced in Appendix B.

A. INTERMODAL FREIGHT

Six individuals attended the intermodal focus group meeting. Representatives from the Montana Motor Carriers Association, Montana Western Railway, Montana Citizens Freight Rate, Montana Farmers Union, the Port of Shelby, and the Department of Natural Resources and Conservation were present. The comment focused mainly on the Intermodal Freight and the Economic Development policy papers.

The stakeholders in attendance made the following comments and suggestions:

1. Planning and Coordination

- Freight carriers should cooperate and plan together.
- The group felt that it was very important to have an in-house freight expert at MDT. The State needs to know what is going on with shippers in Montana and other states and monitor federal actions because they affect local shippers. The state needs to keep shippers informed.

2. Freight Mobility

a. Motor Carrier

- The statement that heavier trucks have a disproportionately higher impact on pavement conditions needs to be clarified. The term heavier truck is too general and its application in the policy paper is unclear. Axle weights are set by law and the gross weights are determined by a formula insuring weight distribution over the length of the truck. Longer combination vehicles actually distribute the gross weight over greater lengths and have lower axle weights than five axle trucks, and therefore have less impact.

- The policy paper reports the key finding of Montana's cost responsibility study that motor carriers pay their share of interstate and primary system costs. However, more emphasis could be placed on describing the role the motor carrier industry plays and the different markets served to provide a more positive emphasis on the role of trucks in Montana. A comprehensive study of truck freight mobility and its impact on the state's economy should be completed.
- The Montana Motor Carriers were concerned that any diversion of highway funds to rail should not take place. Rail funding was not opposed but using highway funds for rail was.
- There was concern about the impact of trucks on secondary system routes that were not constructed to handle larger trucks.

b. Rail

- Railroads are the best carrier to move freight out of rural areas.
- When addressing branch line preservation, the following items need to be considered:
 - Perform cost-benefit analysis to determine whether it is more cost-effective to retain the line or update the road to accommodate the freight. (For example, the branch line into Valier is threatened, however, that line moves a lot of grain.)
 - A uniform mechanism to address branch line problems on a case-by-case basis should be developed. Each case needs to be subjected to a thorough benefit-cost analysis.
 - Working with the railroad industry to facilitate preservation is very important.
- State funding of improvements that increase rail performance, if implemented, should be subject to rigid controls and be monitored carefully. Strong community support should be mandatory.
- Efforts to address priority grade separation needs should be cooperative.
- It is unrealistic for the state to purchase rail cars. There is not a rail car shortage. They just need to be reallocated.

- The state should not be in the rail car business. If there are rail car shortages, look at providing tax incentives to the growers and elevators for them to lease the cars. The state should not be making grants to private businesses.

B. BICYCLE, PEDESTRIAN AND ENVIRONMENTAL

Seven representatives from the Department of Natural Resources and Conservation, the Alternative Energy Resources Organization, and the Montana Audubon Council attended. Their comments addressed the Bicycle and Pedestrian Transportation and the Access Management and Land Use policy papers. Stakeholders made the following comments and recommendations:

1. Planning and Coordination

- The management systems should act as tools to put MDT in a proactive mode to anticipate problems and plan for appropriate alternatives.
- Costs should be factored into alternatives so better decisions can be made.
- The existing forecasting methodology needs to be revised to address vehicle miles traveled, not just total miles traveled. How many passenger trips and what are the lengths of those trips are data that should be analyzed. The forecasting methodology will affect decision making and allocation of resources.
- The plan alternatives document does not show how environmental considerations have been addressed. There is no policy paper that addresses air quality and the natural environment.
- Interagency cooperation was strongly endorsed. It was pointed out that there are existing efforts to address environmental issues early on in the project development process that MDT and federal and other state agencies are already undertaking. This should be referenced in the plan.
- Funding mechanisms need to be revised in order to consider multimodal projects.
- We need to be reducing traffic growth and not planning how to accommodate it.

- The plan needs to be more far reaching in promoting alternatives to the single occupancy vehicle and in building a transportation system which will prevent the plan's traffic forecasts from becoming a self fulfilling prophecy.

2. Roadways

- The roadway policies should include more consideration of transportation demand management and the potential to reduce daily trips and decrease single-occupant-vehicle use.
- Highways should not be designed to handle peak hour traffic, because the road at other times is not handling such large volumes.

3. Access Management

- Access management must address incentives. Areas that do not implement access management should not be rewarded with large projects.

4. Land Use Planning

- There was support for land use planning and the recognition that local jurisdictions will require technical assistance.

5. Public Transportation

- The plan does not address children's use of public transportation. More children would ride or walk to school if safety and congestion barriers were removed. Parents drive to school and cause congestion problems because of these perceived barriers.

6. Bicycle and Pedestrian

- When designing projects inside city limits, consider how to serve all modes and how new improvements will impact pedestrian and bike traffic.
- The plan needs to further consider pedestrian traffic.

C. MPO AND URBAN AREA

The MPO and Urban Area focus group meeting was attended by four planners from Lewis and Clark County, Yellowstone County, and Anaconda-Deer Lodge County.

The following comments and recommendations were recorded:

1. Planning and Coordination

- MDT should focus planning efforts on early right-of-way acquisitions.
- Mixing private and public monies is very complicated and complex.
- MDT should assist local governments. However, local governments can best determine what the needs are.
- There needs to be some statewide coordination, especially to address the tourist industry.

2. Roadways

- Local government needs funds to reconstruct highways to handle truck traffic.

3. Freight Mobility

- There should be tax incentives to railroads.

4. Access Management

- It will be critical to acknowledge local government's role in access management planning.

5. Land Use

- MDT should encourage local governments to focus on zoning.
- Intersections create new traffic demands and different land use. Will MDT interface intersection planning with land use planning? Land use planning should be completed before interchanges are built. Understanding the relationships between land use and transportation planning is important.

D. PUBLIC TRANSPORTATION

Eight individuals attended the public transportation focus group meeting. Their comments addressed the Public Transportation policy paper and the Plan Alternatives. Representatives from urban transit systems, rural transit systems, the Public Service Commission, the National Association of Rail Passengers, and developmentally disabled advocate organizations were present. Stakeholders made the following comments and recommendations focusing on public transportation issues:

1. Local Transit Service

- A Billings survey indicated that 90 percent of the population never uses public transportation, but they declared it was an essential service for the city. There is support for transit and this should be documented.
- Language outlining some of the disadvantages of public transportation needs to be changed. Climate is no more of a problem in Montana than Buffalo, New York.
- The group believed MDT could best support and promote public transportation with the following actions:
 - Helping local transit agencies to develop business and marketing plans and to coordinate with other existing public transportation services.
 - Coordinating with the Public Service Commission.
 - Having a staff person at the state level work to address the needs of nontraditional transportation modes.
 - Publishing a master bus schedule of all the major carriers. This could be in a print or electronic format.
 - Addressing public transportation needs when highway improvements are made.
- The concept of establishing minimum acceptable levels of transit solicited the following comments:
 - Clarify minimum acceptable levels and tell us how it will be interfaced with grants.

- Local decision makers and transportation systems should set the standards, not the state.
- All modes should be subject to minimum standards, it appears that public transportation is treated differently.

2. Intercity Passenger Services

- For intercity passenger service, investigate the high speed trains that have been used in other countries.

3. Funding

- We should not view transit as competing with highways for funding. Rather, funding should look at ways highway and transit projects can compliment one another. As the system is presently set up, it would be hard for non-traditional modes to compete for dollars. Changes are required to make the competition process more equitable. MDT's role should be developing that mechanism to assure that public transportation projects receive fair review--the present law precludes this.
- Some local projects making applications under the Surface Transportation Program (STP) may be unable to come up with the required match.
- Local governments should determine how public transit dollars are spent, not the state. This needs to be stated in TranPlan21. Local funding decisions/allocation should not affect a city's ability to compete for state grants.

4. Improvements to Passenger Intermodal Facilities

- The proposal to improve publicly owned intermodal passenger facilities solicited these comments:
 - Intermodal facility rehabilitation must address improvements in lighting, parking, and ramps for persons with disabilities.
 - There is a need to preserve the platforms on the southern rail route, just in case Amtrak is reactivated.

5. Improvements to Social Service Passenger Service

- The proposal to improve service to disadvantaged and social service passengers solicited the following comments:
 - Coordination is best improved at the local level. There are initiatives already underway aimed at improving coordination.
 - The biggest problem for these passengers is service in the rural areas. In urban areas funding and service levels are okay.
 - Providing coordination assistance would be the top priority. If MDT chooses to coordinate services for this population, it should look at developing a demonstration project and if it is successful, it could be implemented in other parts of the state.

6. Transportation Demand Management

- The proposal to implement transportation demand management received the following comment:
 - Public transit programs should not be held responsible to incorporate transportation demand management strategies into their transit development plans. The role of TDM and the responsibilities for implementation should be established by the urban area planning processes.

E. STATE AND FEDERAL AGENCY

Nine individuals attended the state and federal agency focus group meeting. Representatives from the Forest Service, State Departments of Agriculture, Natural Resources and Conservation, Commerce, Fish Wildlife and Parks, Bureau of Indian Affairs, Federal Environmental Protection Agency, and Federal Highway Administration were present.

The stakeholders provided the following comments on the policy papers and plan alternatives:

1. Planning and Coordination

- Address existing gaps in linking the interstate and primary systems with Forest Service roads. There must be access to county roads, good directional signage, and these arterial routes must be maintained. Therefore, MDT should coordinate closely with federal agencies.
- Environmental considerations must be factored into all planning processes. Greater attention and reference should be made to the key factors generating environmental impacts and to the different processes which are being implemented to address environmental issues. This includes the recently prepared memorandum of understanding involving state and federal resource agencies and the MDT.
- Although preservation and quality of life are recognized as local issues, it should be stated somewhere in the plan.
- The existing financial district law creates impediments which must be addressed.

2. Economic Development

- The city park/rest area program may be popular, but does it produce the desired economic benefits for the community? Have there been any feasibility studies conducted?

3. Freight Mobility

- There is a lack of representation at the federal level and this is harming Montana's rail transportation system. MDT needs to have an in-house modal expert to monitor rail mergers, keep abreast of federal legislation and regulations, and be represented at the Interstate Commerce Commission.
- Burlington Northern does not maintain their routes, so there must be an enforcement mechanism to address this.
- MDT needs to address rail service into Canada.

4. Access Management

- Access management must be addressed in certain areas, but not all parts of the state should be required to develop access management plans. In order for access management to work, MDT is going to need a broad support base.
- The Department of State Lands submitted written comment regarding access management: "State Lands primary interest is access management and land use. We want access management to be maintained or improved on state lands. State Lands personnel need to be involved in land use and access planning when their lands are affected."

5. Land Use

- Some stakeholders thought that the state should not be involved in land use planning, however, others believe MDT has a vested interest in being involved and they gave the example of the Gallatin Canyon.

6. Public Transportation and Intercity Passenger Service

- Air service in northeastern communities is very costly--it is cheaper for people to drive into the larger airports to make connecting flights. Air service is crucial to those areas, and this must be acknowledged in the plan.

IV. TRIBAL GOVERNMENTS' ISSUES



Presentations of the plan alternatives and the policy papers were made to the seven tribal governments in Montana. This section reports the comments made by the tribal governments and their representatives. Written comment was also received and is reproduced in Appendix B.

A. ASSINIBOINE AND GROS VENTRE TRIBAL COUNCIL

Three tribal council members, Wesley Main, John Healy, the Fort Belknap transportation planning specialist, five county commissioners from Blaine and Phillips Counties, and Harlan Mount attended the meeting in Harlan. The following comments were recorded:

1. Planning and Coordination

- Frustration was expressed regarding the restrictions that affect federal funding for the Tribes. State and county governments should work together to address this problem.
- Participants did not want any new taxes for transportation infrastructure.

2. Roadways

- Concern about the effect of TranPlan 21 on highway improvements through the reservation, for example on Montana 66.
- Pavement design problems need to be addressed for future projects.

B. ASSINIBOINE AND SIOUX TRIBAL COUNCIL

Assiniboiné and Sioux Tribal Council members present at a meeting in Fort Peck included: Gene Culbertson, Tribal Council Chairman and five council members.

The following comments were made:

- The Tribal Council wanted better roads and felt that other transportation services were adequate. There was some interest in bus and rail services, however, the consensus was that this service could be subsidized.

C. BLACKFEET TRIBAL COUNCIL

Members of the Blackfeet Tribal Council and their key staff attended a meeting in Browning. They included: Tom Thompson, Blackfeet Tribal Council, Gabe Grant, Blackfeet Tribal Council, and Ron Bird, Transportation Planning Director.

The following comments were recorded:

- The main concerns expressed were unrelated to TranPlan 21 and involved labor issues on highway construction projects.
- There was interest in the policy papers and plan alternatives.

D. CHIPPEWA AND CREE TRIBAL COUNCIL

The Chippewa Cree Tribal Council was briefed on the policy papers and the plan alternatives at Box Elder. In attendance were: John Sun Child, Chairman, Alvin Windy Boy, Joe Big Knife, Duncan Standing Rock, Richard Sangrey, Tribal Staff and Pete Lemere, Tribal Staff.

The following comments were recorded:

1. Roadways

- The Tribal Council expressed an interest in the Scenic Byway program, especially if funds were available to make improvements.

2. Economic Development

- The Tribe is interested in contracting with the Montana Department of Transportation to maintain rest areas.

3. Public Transportation/Intercity Passenger Service

- The essential air service to Havre is important, but there is a need for better connections in Billings.

E. CONFEDERATED SALISH AND KOOTENAI TRIBAL COUNCIL

The Salish and Kootenai Tribal Council and staff were briefed on the plan alternatives and policy papers in Pablo. Present at that meeting were the following council members: Donald Dupuis, Fred Matt, Hank Baylor, Louis Adams, Michael Pablo, Chair, Rhonda Swaney, Vice Chair, and Sonny Morigeau.

The following comments were provided:

- Issues of safety are extremely important to the tribes. High value is placed on life.
- Access management is needed and MDT should be working actively with the tribes and neighboring jurisdictions. A comprehensive resource management plan is being prepared for the reservation which will provide a good basis for coordination. The tribes are also working with Missoula and Lake Counties on a land use study for the Highway 93 Corridor.
- Environmental protection and preservation of the quality of life are both important goals.
- Action is needed now for corridor management and Highway 93 should be put on the fast track.
- Members noted the Tribal Council will submit detailed comments on the plan alternatives and policy papers in writing.

F. CROW TRIBAL COUNCIL

The Crow Tribal Council and their staff were briefed on the plan alternatives and the policy papers at Crow Agency.

The Following comments were made:

- Roadways
 - The number one concern was safety.

- Participants supported speed and weight enforcements, widening and shoulder enhancements for non-motorized vehicles, more signing for highways and the city/park rest area program.

G. NORTHERN CHEYENNE TRIBAL COUNCIL

The Northern Cheyenne Tribal Council and their staff were briefed on the plan alternatives and the policy papers in Lame Deer.

- Roadways
 - Safety was a major concern.
 - There were a number of project specific comments.
 - Lack of adequate maintenance on reservation roads was a concern.

V. WRITTEN COMMENTS



In addition to comment provided in the meetings, MDT received written comments. Comments received by November 22 are available in Appendix B which is available on request. All were initially invited to a focus group meeting and either could not attend or provided written comment in addition to their comments at the meeting. There were also calls on the TranPlan 21 hotline.

A. PUBLIC SECTOR COMMENTS

Written comments were received from the following public sector agencies:

- Great Falls City-County Planning Board, John Mooney, Director.
- Missoula City-County Office of Community Development, Mark Landkammer, Transportation Planner.
- Missoula Department of Public Works, Karen Fullet Jaworsky, Bicycle and Pedestrian Coordinator.
- Montana Department of Fish Wildlife and Parks, Bob Walker, State Trails Coordinator.
- Public Service Commission, Wayne Budt, Administrator.
- State Historic Preservation Office, Marcella Sherfy, Preservation Officer.
- U.S. Environmental Protection Agency, John Wardell.
- U.S. Forest Service, Beryl Johnston.
- U.S. Fish and Wildlife Service, Kemp McMaster, Montana Field Supervisor.
- Department of Natural Resources and Conservation, Mark Simonich, Director.
- Office of Public Instruction, Mary Cheryl Larango

B. WRITTEN COMMENTS FROM CITIZEN GROUPS

Written comments were received from the following special interest groups:

- Alternative Energy Resources Organization, Paul Reichert, Program Coordinator.
- Bicycle Federation of America, John Williams.
- Citizens for a Better Flathead, Bruce Boody, Judy Cornell, Co-Chairs.
- Flathead Valley Bicycle Club, Check Haney.

- Glacier Cyclery, Ron R. & Jan Brunk, Owners.
- Missoula Bicycle Pedestrian Advisory Board, Winnie Schreiber.
- Montana Independent Living Project, Raelen Willard, Information Officer.
- North Valley Trails Council, Michael Kane, President.
- Scenic Preservation Committee of Citizens for a Better Flathead, Clair Strickler, Secretary.

C. COMMENTS FROM TRIBAL GOVERNMENTS

Written comments were received from the following organizations and individuals:

- Salish-Kootenai Tribes, Michael Pablo, Chairman

D. WRITTEN COMMENTS FROM TRANSPORTATION STAKEHOLDERS

Written comments were received from the following organizations and individuals:

- Montana Motor Carriers Association, Ben Havdahl, Executive Vice-President.
- TransSystems, Inc., Mike Rice, President.
- Alternative Energy Resources Organization.

E. WRITTEN COMMENTS FROM MONTANA CITIZENS

Written comments were received from the following citizens:

- Frances Coover, Missoula.
- Robert Hakey, Lewistown.
- Marcia Hums
- Russell Johnson, Michele Hebert, Bozeman.
- Cedron Jones, Helena.
- Mary Meagher
- Helen Pederson, Libby.
- Mary Yuricic, Helena.

F. TELEPHONE COMMENTS FROM MONTANA CITIZENS

Eight telephone comments were received on the toll-free hotline.

Montana Department of Transportation

Appendix A Public Involvement Checklist Results Helena



N=17⁵

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
PLAN ALTERNATIVES						
Alternative 1: No Policy Change - Declining Service Levels			2	5	8	
Alternative 2: Preserving the Current System and Undertaking Limited New Initiatives.	3	7	1	4		
Alternative 3: Maintaining Current Level of Mobility by Increasing Travel Options Where Cost Effective and Improving Intermodal Connections.	12	5				
Alternative 4: Developing a High Service Transportation System.	5	2	4	4		
POLICY CHOICES						
ROADWAY CHOICES						
POLICY GOAL A. - Establish Priorities for Roadway Improvements	1	6	2	1		
Action A.1. Maintain current procedures.	1	5	1	5		
Action A.2. Establish the following priorities: 1) Preservation of Montana's Highway System, 2) Safety Improvements 3) Capacity Expansion, and 4) Other Improvements.	5	8	2	1	1	

⁵Seventeen individuals returned the checklist. They did not necessarily respond to all questions.

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
POLICY GOAL B. - Modernize Montana's Highway Infrastructure	1	8	2			
Action B.1. Review the Geometric Design Standards.	3	5	5			
Action B.2. Undertake right-of-way preservation in growing corridors.	6	6	3			
POLICY GOAL C - Identify and Deploy Cost-Effective Intelligent Vehicle Highway System (IVHS) Applications To Improve Safety and Capacity	1	4	6			
Action C.1. Deploy advanced vehicle technologies in lieu of highway system improvements to improve safety and capacity.		6	8			
Action C.2. Prioritize system preservation and maintenance.	6	7	1			
ECONOMIC DEVELOPMENT CHOICES						
POLICY GOAL A: Ensure the transportation system provides cost effective access for Montana's export oriented industry to market.	6	6	1			
Action A.1. Work with shippers and private providers to identify access improvements.	5	10	2		1	
Action A.2. Prioritize support for export industries.	4	5	6	2	1	
Action A.3. Work with commercial air carriers to maintain existing levels of service.	6	11	2			
POLICY GOAL B: Ensure Economic Development Priorities are Factored into Transportation Planning and Programming	3	9	2	1		
Action B.1. Coordinate with the Department of Commerce.	5	8	3			
Action B.2. Establish a city park and rest area program to encourage visitors to contribute to economic development.	7	8	1	1		
POLICY GOAL C: Engage in multistate and regional initiatives that facilitate international trade.	5	8	1			
Action C.1. Participate in examination of multistate trade corridors.	5	9	3			
Action C.2. Coordinate planning with Canadian Provincial governments.	6	9	2			

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
POLICY GOAL D: Promote tourism and access to recreational destinations.	3	6	2	2		
Action D.1. Prioritize transportation enhancements that promote tourist access.	4	7	4	3		
Action D.2. Provide signage for tourism-related activities and minimize billboards.	9	6	2	2		
FREIGHT MOBILITY CHOICES						
POLICY GOAL A - Ensure Efficient Highway Freight Mobility	3	6	1			
Action A.1. Prioritize improvements in highway freight corridors.	2	10	3			
Action A.2. Address impediments to efficient movement on highway freight corridors.	1	11	3			
Action A.3. Ensure freight corridors are addressed by local and regional planning.	5	11	1			
Action A.4. Ensure that Montana's border crossing needs are met.	5	9	1			
POLICY GOAL B - Ensure a Balanced Freight System by Preserving the Existing Rail and Air System.	1	6	1			
Action B.1. Preserve threatened branch lines.	5	5	6	1		
Option B.1.a. Take no action			4	5	4	
Option B.1.b. Work with the railroad industry to facilitate the preservation of branch lines.	6	10	1			
Option B.1.c. Provide financial support for the maintenance of threatened branch lines based upon strict criteria.	3	3	7	4		
Option B.1.d. Purchase the rights of way, maintain the track and lease the use of branch lines threatened with closure.	4	5	5	4	1	
Action B.2. Improve the performance of Montana's freight rail system	3	7	3			
Option B.2.a. Take no action.		2	3	2	5	
Option B.2.b. Fund improvements that will make significant increases in freight rail performance in key freight corridors.	4	6	6			

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
Action B.3. Address priority grade separation needs at busy railroad crossings.	2	11	3			
Action B.4. Retain existing rights of way in rail corridors.	6	8	3			
POLICY GOAL C - Improve Intermodal Connectivity Through Increased use of Intermodal Freight Facilities	2	7	1			
Action C.1. Encourage the use of and improve the performance of existing intermodal facilities.	4	12	2			
Action C.2. Encourage the use of existing truck/rail reload facilities.	3	14				
Action C.3. Determine the feasibility of state provision of rail cars.	3	3	4	4	2	1
Action C.4. Ensure MDT has in-house modal expertise to address freight issues associated with Interstate Commerce Commission (ICC) requirements.	4	6	5	1		
ACCESS MANAGEMENT CHOICES						
POLICY OPTION A: Retain the existing Access Management Plan Approach.		2	2	7		1
Action A.1. Do not regulate highway access further.		1	2	10	2	
POLICY OPTION B: Strengthen use of access controls in fast growing areas.	6	8				
Action B.1. Establish a classification scheme for access management.	3	12	2			
POLICY OPTION C: Develop and implement a comprehensive access management plan.	3	7				
Action C.1. Identify areas and corridors within the State that require rapid action and pursue a "jump start" program to address them.	6	7	4			
Action C.2. Identify corridors likely to require expansion or reconfiguration for access management purposes.	6	10	1			
POLICY D: Establish and fund a level of travel demand forecasting that will support an access management program.	2	9	3		1	

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
LAND USE CHOICES						
POLICY OPTION A: Do not address land use on a case by case basis.	2	2	1	9	3	
POLICY OPTION B: Encourage local jurisdictions to undertake land use planning to manage transportation demand.	8	9		1		
Action B.1. Work with local jurisdictions to establish a consistent approach.	5	11	2			
Action B.2. Establish and fund technical assistance for local jurisdictions to undertake land use planning.	6	9		1	1	
POLICY OPTION C: Provide authority to require developers to pay for resulting traffic demands.	8	7	3			
POLICY OPTION D: Enact legislation supporting land use planning in fast growing counties.	7	5	5			
PUBLIC TRANSPORTATION CHOICES						
POLICY GOAL A: Support Increased Use of Public Transportation Systems	5	3	4			
Action A.1. Develop promotional/educational programs to publicize public transportation opportunities.	4	8	5			
Action A.2. Ensure highway improvements address public transportation needs.	8	7	3			
Action A.3. Provide state-level funding support for transit.	4	5	7			
Option A.3.a. Allow transit projects to compete with highway improvement for funding.	2	5	5	4		
POLICY GOAL B: Preserve Existing Intercity Public Transportation Service.	1	9				
Action B.1. Identify the most effective actions.	6	8	2			
Action B.2. Evaluate the costs and feasibility of funding new intercity service in unserved areas.	5	9	1	1		
Action B.3. Implement a "rural ridesharing" demonstration program.	5	9	2	1		1
Action B.4. Improve intermodal passenger facilities.	4	7	5			
Action B.5. Coordinate with Amtrak to facilitate increased use of rail and preservation of existing service levels.	5	10	3			

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
POLICY GOAL C: Improve Service to Social Service Passengers.	1	7	3	1		
Action C.1. Ensure state agencies coordinate service provision.	4	9	2	1		
Action C.2. Investigate the need to facilitate easier entry into passenger service provision.	4	7	4	1		
POLICY GOAL D: Implement Transportation Demand Management (TDM) Actions that will Work in Montana.	3	2	4	1		
Action D.1. Encourage transit providers to include demand-side strategies in their development plans.	5	7	4	1		
Action D.2. Work with other state agencies to develop a TDM program for state government.	7	6	4	1		
BICYCLE AND PEDESTRIAN CHOICES						
POLICY OPTION A: Institutionalize Bicycle and Pedestrian Modes.	6	3	1	2		
Action A.1. Develop the State Bicycle and Pedestrian program.	7	3	4	1		
Action A.2. Prepare a bicycle related tourist guide.	4	9	2	2		
Action A.3. Establish an advisory committee.	6	6	1	2	1	
Action A.4. Disseminate public service announcements addressing bicycle and pedestrian safety.	5	9	1	1		1
POLICY GOAL B: Make Targeted Bicycle-related Improvements.	6	4	2			
Action B.1. Identify a network of bicycle routes to provide the basis for planning and system improvement decisions.	9	5	1	1		1
Action B.2. Improve bicycle facilities in Montana	8	4	3			1
Action B.3. Adopt and implement consistent bicycle-friendly maintenance standards.	9	7	1			
Action B.4. Preserve the designated bicycle network in a generally smooth, clean, and safe condition.	8	7		1		

Montana Department of Transportation

Appendix A Public Involvement Checklist Results Kalispell



N=6⁶

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
PLAN ALTERNATIVES						
Alternative 1: No Policy Change - Declining Service Levels				2	3	
Alternative 2: Preserving the Current System and Undertaking Limited New Initiatives.	1	3		1		
Alternative 3: Maintaining Current Level of Mobility by Increasing Travel Options Where Cost Effective and Improving Intermodal Connections.	4	2				
Alternative 4: Developing a High Service Transportation System.	2	1		2		
POLICY CHOICES						
ROADWAY CHOICES						
POLICY GOAL A. - Establish Priorities for Roadway Improvements	3	1				
Action A.1. Maintain current procedures.		1	2	3		
Action A.2. Establish the following priorities: 1) Preservation of Montana's Highway System, 2) Safety Improvements 3) Capacity Expansion, and 4) Other Improvements.	1	3	1			

⁶Six individuals returned the checklist. They did not necessarily respond to all questions.

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
POLICY GOAL B. - Modernize Montana's Highway Infrastructure	1	2				
Action B.1. Review the Geometric Design Standards.	1	2	2			
Action B.2. Undertake right-of-way preservation in growing corridors.	5					
POLICY GOAL C - Identify and Deploy Cost-Effective Intelligent Vehicle Highway System (IVHS) Applications To Improve Safety and Capacity	2	2	1			
Action C.1. Deploy advanced vehicle technologies in lieu of highway system improvements to improve safety and capacity.	1	1	1	2		
Action C.2. Prioritize system preservation and maintenance.	4	1				
ECONOMIC DEVELOPMENT CHOICES						
POLICY GOAL A: Ensure the transportation system provides cost effective access for Montana's export oriented industry to market.	3	1				
Action A.1. Work with shippers and private providers to identify access improvements.	3	2				
Action A.2. Prioritize support for export industries.	2	5				
Action A.3. Work with commercial air carriers to maintain existing levels of service.	1	4				
POLICY GOAL B: Ensure Economic Development Priorities are Factored into Transportation Planning and Programming	3	1				
Action B.1. Coordinate with the Department of Commerce.	3	1		1		
Action B.2. Establish a city park and rest area program to encourage visitors to contribute to economic development.	2	2	1			
POLICY GOAL C: Engage in multistate and regional initiatives that facilitate international trade.	4					
Action C.1. Participate in examination of multistate trade corridors.	4	1				
Action C.2. Coordinate planning with Canadian Provincial governments.	4	1				

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
POLICY GOAL D: Promote tourism and access to recreational destinations.	1	1	1			
Action D.1. Prioritize transportation enhancements that promote tourist access.	2	3				
Action D.2. Provide signage for tourism-related activities and minimize billboards.	3	2				
FREIGHT MOBILITY CHOICES						
POLICY GOAL A - Ensure Efficient Highway Freight Mobility	1	2				
Action A.1. Prioritize improvements in highway freight corridors.	3	2				
Action A.2. Address impediments to efficient movement on highway freight corridors.	3	2				
Action A.3. Ensure freight corridors are addressed by local and regional planning.	4	1				
Action A.4. Ensure that Montana's border crossing needs are met.	4	1				
POLICY GOAL B - Ensure a Balanced Freight System by Preserving the Existing Rail and Air System.	1	1	1			
Action B.1. Preserve threatened branch lines.		2	1			
Option B.1.a. Take no action			1		2	
Option B.1.b. Work with the railroad industry to facilitate the preservation of branch lines.	1	2	1			
Option B.1.c. Provide financial support for the maintenance of threatened branch lines based upon strict criteria.		1		1	1	
Option B.1.d. Purchase the rights of way, maintain the track and lease the use of branch lines threatened with closure.		1	2	2		
Action B.2. Improve the performance of Montana's freight rail system		1	1			
Option B.2.a. Take no action.			1	1	2	
Option B.2.b. Fund improvements that will make significant increases in freight rail performance in key freight corridors.		2		1	1	

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
Action B.3. Address priority grade separation needs at busy railroad crossings.	2	1		1		
Action B.4. Retain existing rights of way in rail corridors.	1	3				
POLICY GOAL C - Improve Intermodal Connectivity Through Increased use of Intermodal Freight Facilities	1	3				
Action C.1. Encourage the use of and improve the performance of existing intermodal facilities.	2	3				
Action C.2. Encourage the use of existing truck/rail reload facilities.	3	1	1			
Action C.3. Determine the feasibility of state provision of rail cars.		1	2	1	1	
Action C.4. Ensure MDT has in-house modal expertise to address freight issues associated with Interstate Commerce Commission (ICC) requirements.	1	4				
ACCESS MANAGEMENT CHOICES						
POLICY OPTION A: Retain the existing Access Management Plan Approach.		1	2	1	1	
Action A.1. Do not regulate highway access further.			1	3		
POLICY OPTION B: Strengthen use of access controls in fast growing areas.	4	1				
Action B.1. Establish a classification scheme for access management.	3	1	1			
POLICY OPTION C: Develop and implement a comprehensive access management plan.	6					
Action C.1. Identify areas and corridors within the State that require rapid action and pursue a "jump start" program to address them.	5					
Action C.2. Identify corridors likely to require expansion or reconfiguration for access management purposes.	4	1				
POLICY D: Establish and fund a level of travel demand forecasting that will support an access management program.	2	2				

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
LAND USE CHOICES						
POLICY OPTION A: Do not address land use on a case by case basis.			1	1	2	
POLICY OPTION B: Encourage local jurisdictions to undertake land use planning to manage transportation demand.	5	1				
Action B.1. Work with local jurisdictions to establish a consistent approach.	5	1				
Action B.2. Establish and fund technical assistance for local jurisdictions to undertake land use planning.	3		1	2		
POLICY OPTION C: Provide authority to require developers to pay for resulting traffic demands.	5			1		
POLICY OPTION D: Enact legislation supporting land use planning in fast growing counties.	4		1	1		
PUBLIC TRANSPORTATION CHOICES						
POLICY GOAL A: Support Increased Use of Public Transportation Systems	4	1				
Action A.1. Develop promotional/educational programs to publicize public transportation opportunities.	2	4				
Action A.2. Ensure highway improvements address public transportation needs.	2	4				
Action A.3. Provide state-level funding support for transit.	1	1	1	3		
Option A.3.a. Allow transit projects to compete with highway improvement for funding.	1	1	1	1	1	
POLICY GOAL B: Preserve Existing Intercity Public Transportation Service.	1	2	1			
Action B.1. Identify the most effective actions.	2	3				
Action B.2. Evaluate the costs and feasibility of funding new intercity service in unserved areas.	1	3		1		
Action B.3. Implement a "rural ridesharing" demonstration program.	3	1	1			
Action B.4. Improve intermodal passenger facilities.	4	1				
Action B.5. Coordinate with Amtrak to facilitate increased use of rail and preservation of existing service levels.	3	1		1		

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
POLICY GOAL C: Improve Service to Social Service Passengers.	1	2	1			
Action C.1. Ensure state agencies coordinate service provision.	1	4				
Action C.2. Investigate the need to facilitate easier entry into passenger service provision.	1	2	2			
POLICY GOAL D: Implement Transportation Demand Management (TDM) Actions that will Work in Montana.	1	1	2			
Action D.1. Encourage transit providers to include demand-side strategies in their development plans.	1	4				
Action D.2. Work with other state agencies to develop a TDM program for state government.	1	3	1			
BICYCLE AND PEDESTRIAN CHOICES						
POLICY OPTION A: Institutionalize Bicycle and Pedestrian Modes.	2	2				
Action A.1. Develop the State Bicycle and Pedestrian program.	3	1	1			
Action A.2. Prepare a bicycle related tourist guide.	3	1		1		
Action A.3. Establish an advisory committee.	3	2				
Action A.4. Disseminate public service announcements addressing bicycle and pedestrian safety.	2	1	1	1		
POLICY GOAL B: Make Targeted Bicycle-related Improvements.	1	3				
Action B.1. Identify a network of bicycle routes to provide the basis for planning and system improvement decisions.	2	5				
Action B.2. Improve bicycle facilities in Montana	2	3				
Action B.3. Adopt and implement consistent bicycle-friendly maintenance standards.	2	3				
Action B.4. Preserve the designated bicycle network in a generally smooth, clean, and safe condition.	2	3				

Montana Department of Transportation

Appendix A Public Involvement Checklist Results Miles City



N=4⁷

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
PLAN ALTERNATIVES						
Alternative 1: No Policy Change - Declining Service Levels		1		1	1	
Alternative 2: Preserving the Current System and Undertaking Limited New Initiatives.	1	1		1		
Alternative 3: Maintaining Current Level of Mobility by Increasing Travel Options Where Cost Effective and Improving Intermodal Connections.	1	2				
Alternative 4: Developing a High Service Transportation System.	2		1			
POLICY CHOICES						
ROADWAY CHOICES						
POLICY GOAL A. - Establish Priorities for Roadway Improvements	1	2				
Action A.1. Maintain current procedures.		1	1			1
Action A.2. Establish the following priorities: 1) Preservation of Montana's Highway System, 2) Safety Improvements 3) Capacity Expansion, and 4) Other Improvements.	1	2				

⁷Four individuals returned the checklist. They did not necessarily respond to all questions.

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
POLICY GOAL B. - Modernize Montana's Highway Infrastructure		3				
Action B.1. Review the Geometric Design Standards.	1	2				
Action B.2. Undertake right-of-way preservation in growing corridors.		1	1			
POLICY GOAL C - Identify and Deploy Cost-Effective Intelligent Vehicle Highway System (IVHS) Applications To Improve Safety and Capacity		3				
Action C.1. Deploy advanced vehicle technologies in lieu of highway system improvements to improve safety and capacity.	1	1	1			
Action C.2. Prioritize system preservation and maintenance.		3				
ECONOMIC DEVELOPMENT CHOICES						
POLICY GOAL A: Ensure the transportation system provides cost effective access for Montana's export oriented industry to market.		3				
Action A.1. Work with shippers and private providers to identify access improvements.		2				1
Action A.2. Prioritize support for export industries.		2				1
Action A.3. Work with commercial air carriers to maintain existing levels of service.	1	2				
POLICY GOAL B: Ensure Economic Development Priorities are Factored into Transportation Planning and Programming	1	2				
Action B.1. Coordinate with the Department of Commerce.		3				
Action B.2. Establish a city park and rest area program to encourage visitors to contribute to economic development.		2	1			
POLICY GOAL C: Engage in multistate and regional initiatives that facilitate international trade.	2	1				
Action C.1. Participate in examination of multistate trade corridors.	1	2				
Action C.2. Coordinate planning with Canadian Provincial governments.	2	1				

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
POLICY GOAL D: Promote tourism and access to recreational destinations.	2	1				
Action D.1. Prioritize transportation enhancements that promote tourist access.	2	1				
Action D.2. Provide signage for tourism-related activities and minimize billboards.	2	1				
FREIGHT MOBILITY CHOICES						
POLICY GOAL A - Ensure Efficient Highway Freight Mobility		3				
Action A.1. Prioritize improvements in highway freight corridors.		3				
Action A.2. Address impediments to efficient movement on highway freight corridors.		3				
Action A.3. Ensure freight corridors are addressed by local and regional planning.		3				
Action A.4. Ensure that Montana's border crossing needs are met.		3				
POLICY GOAL B - Ensure a Balanced Freight System by Preserving the Existing Rail and Air System.	2	1				
Action B.1. Preserve threatened branch lines.	2	1				
Option B.1.a. Take no action				1	1	
Option B.1.b. Work with the railroad industry to facilitate the preservation of branch lines.	1	1	1			
Option B.1.c. Provide financial support for the maintenance of threatened branch lines based upon strict criteria.		2	1			
Option B.1.d. Purchase the rights of way, maintain the track and lease the use of branch lines threatened with closure.		2	1			
Action B.2. Improve the performance of Montana's freight rail system		3				
Option B.2.a. Take no action.				1	1	
Option B.2.b. Fund improvements that will make significant increases in freight rail performance in key freight corridors.		3				

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
Action B.3. Address priority grade separation needs at busy railroad crossings.		3				
Action B.4. Retain existing rights of way in rail corridors.		3				
POLICY GOAL C - Improve Intermodal Connectivity Through Increased use of Intermodal Freight Facilities	1	2				
Action C.1. Encourage the use of and improve the performance of existing intermodal facilities.	1	2				
Action C.2. Encourage the use of existing truck/rail reload facilities.	1	2				
Action C.3. Determine the feasibility of state provision of rail cars.	1	2				
Action C.4. Ensure MDT has in-house modal expertise to address freight issues associated with Interstate Commerce Commission (ICC) requirements.	1	2				
ACCESS MANAGEMENT CHOICES						
POLICY OPTION A: Retain the existing Access Management Plan Approach.	1		1			
Action A.1. Do not regulate highway access further.		1		1		
POLICY OPTION B: Strengthen use of access controls in fast growing areas.	1		1			
Action B.1. Establish a classification scheme for access management.		1	1			
POLICY OPTION C: Develop and implement a comprehensive access management plan.	1		1			
Action C.1. Identify areas and corridors within the State that require rapid action and pursue a "jump start" program to address them.		1	1			
Action C.2. Identify corridors likely to require expansion or reconfiguration for access management purposes.		1	1			
POLICY D: Establish and fund a level of travel demand forecasting that will support an access management program.	1		2			

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
LAND USE CHOICES						
POLICY OPTION A: Do not address land use on a case by case basis.				1		1
POLICY OPTION B: Encourage local jurisdictions to undertake land use planning to manage transportation demand.	1	1				1
Action B.1. Work with local jurisdictions to establish a consistent approach.		2				1
Action B.2. Establish and fund technical assistance for local jurisdictions to undertake land use planning.		1				1
POLICY OPTION C: Provide authority to require developers to pay for resulting traffic demands.	1	1				1
POLICY OPTION D: Enact legislation supporting land use planning in fast growing counties.	1	1				1
PUBLIC TRANSPORTATION CHOICES						
POLICY GOAL A: Support Increased Use of Public Transportation Systems	1	2				
Action A.1. Develop promotional/educational programs to publicize public transportation opportunities.	1	2				
Action A.2. Ensure highway improvements address public transportation needs.	2	1				
Action A.3. Provide state-level funding support for transit.	2	1				
Option A.3.a. Allow transit projects to compete with highway improvement for funding.	1	2				
POLICY GOAL B: Preserve Existing Intercity Public Transportation Service.		1	1			
Action B.1. Identify the most effective actions.	2	1				
Action B.2. Evaluate the costs and feasibility of funding new intercity service in unserved areas.	1	2				
Action B.3. Implement a "rural ridesharing" demonstration program.	2	1				
Action B.4. Improve intermodal passenger facilities.	2	1				
Action B.5. Coordinate with Amtrak to facilitate increased use of rail and preservation of existing service levels.	1	1	1			

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
POLICY GOAL C: Improve Service to Social Service Passengers.	1	1	1			
Action C.1. Ensure state agencies coordinate service provision.	1	1	1			
Action C.2. Investigate the need to facilitate easier entry into passenger service provision.	1	1	1			
POLICY GOAL D: Implement Transportation Demand Management (TDM) Actions that will Work in Montana.		2	1			
Action D.1. Encourage transit providers to include demand-side strategies in their development plans.		2	1			
Action D.2. Work with other state agencies to develop a TDM program for state government.		3				
BICYCLE AND PEDESTRIAN CHOICES						
POLICY OPTION A: Institutionalize Bicycle and Pedestrian Modes.		3				
Action A.1. Develop the State Bicycle and Pedestrian program.		3				
Action A.2. Prepare a bicycle related tourist guide.		2				1
Action A.3. Establish an advisory committee.		3				
Action A.4. Disseminate public service announcements addressing bicycle and pedestrian safety.		2				
POLICY GOAL B: Make Targeted Bicycle-related Improvements.		2				1
Action B.1. Identify a network of bicycle routes to provide the basis for planning and system improvement decisions.		3				
Action B.2. Improve bicycle facilities in Montana		1	1			1
Action B.3. Adopt and implement consistent bicycle-friendly maintenance standards.		2	1			
Action B.4. Preserve the designated bicycle network in a generally smooth, clean, and safe condition.		3				

Montana Department of Transportation

Appendix A Public Involvement Checklist Results Missoula



N = 15⁸

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
PLAN ALTERNATIVES						
Alternative 1: No Policy Change - Declining Service Levels			1	1	10	
Alternative 2: Preserving the Current System and Undertaking Limited New Initiatives.		3	1	5	2	
Alternative 3: Maintaining Current Level of Mobility by Increasing Travel Options Where Cost Effective and Improving Intermodal Connections.	8	4	1			
Alternative 4: Developing a High Service Transportation System.	5	2	1	2		
POLICY CHOICES						
ROADWAY CHOICES						
POLICY GOAL A. - Establish Priorities for Roadway Improvements	3	3		2		
Action A.1. Maintain current procedures.		2	1	6		
Action A.2. Establish the following priorities: 1) Preservation of Montana's Highway System, 2) Safety Improvements 3) Capacity Expansion, and 4) Other Improvements.	6	5		2		

⁸Fifteen individuals returned the checklist. They did not necessarily respond to all questions.

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
POLICY GOAL B. - Modernize Montana's Highway Infrastructure	2	7				
Action B.1. Review the Geometric Design Standards.		9	1	1		
Action B.2. Undertake right-of-way preservation in growing corridors.	7	3	1			
POLICY GOAL C - Identify and Deploy Cost-Effective Intelligent Vehicle Highway System (IVHS) Applications To Improve Safety and Capacity		5	1	2		
Action C.1. Deploy advanced vehicle technologies in lieu of highway system improvements to improve safety and capacity.	1	6	5	2		
Action C.2. Prioritize system preservation and maintenance.	6	3	2	1		
ECONOMIC DEVELOPMENT CHOICES						
POLICY GOAL A: Ensure the transportation system provides cost effective access for Montana's export oriented industry to market.	4	4	1			
Action A.1. Work with shippers and private providers to identify access improvements.	3	5	2			
Action A.2. Prioritize support for export industries.	3	4	3			
Action A.3. Work with commercial air carriers to maintain existing levels of service.	3	5	2			
POLICY GOAL B: Ensure Economic Development Priorities are Factored into Transportation Planning and Programming	3	4				
Action B.1. Coordinate with the Department of Commerce.	2	5	1			
Action B.2. Establish a city park and rest area program to encourage visitors to contribute to economic development.	5	4	1			
POLICY GOAL C: Engage in multistate and regional initiatives that facilitate international trade.	2	3	1	1		
Action C.1. Participate in examination of multistate trade corridors.	3	4	1	1		
Action C.2. Coordinate planning with Canadian Provincial governments.	3	5		1		

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
POLICY GOAL D: Promote tourism and access to recreational destinations.	3	3	1	2		
Action D.1. Prioritize transportation enhancements that promote tourist access.	6	1	1	1		
Action D.2. Provide signage for tourism-related activities and minimize billboards.	10					
FREIGHT MOBILITY CHOICES						
POLICY GOAL A - Ensure Efficient Highway Freight Mobility	2	3		1		
Action A.1. Prioritize improvements in highway freight corridors.	2	4	2	1		
Action A.2. Address impediments to efficient movement on highway freight corridors.	2	3	3	1		
Action A.3. Ensure freight corridors are addressed by local and regional planning.	4	1	1	2		1
Action A.4. Ensure that Montana's border crossing needs are met.	1	4	2	1		1
POLICY GOAL B - Ensure a Balanced Freight System by Preserving the Existing Rail and Air System.	1	5				
Action B.1. Preserve threatened branch lines.	5	3	1	1		
Option B.1.a. Take no action				5	2	
Option B.1.b. Work with the railroad industry to facilitate the preservation of branch lines.	3	4	2			
Option B.1.c. Provide financial support for the maintenance of threatened branch lines based upon strict criteria.	1	4	3		1	
Option B.1.d. Purchase the rights of way, maintain the track and lease the use of branch lines threatened with closure.	1	5	1	1	1	
Action B.2. Improve the performance of Montana's freight rail system	3	3	1			
Option B.2.a. Take no action.			2	3	4	
Option B.2.b. Fund improvements that will make significant increases in freight rail performance in key freight corridors.	1	7	1			

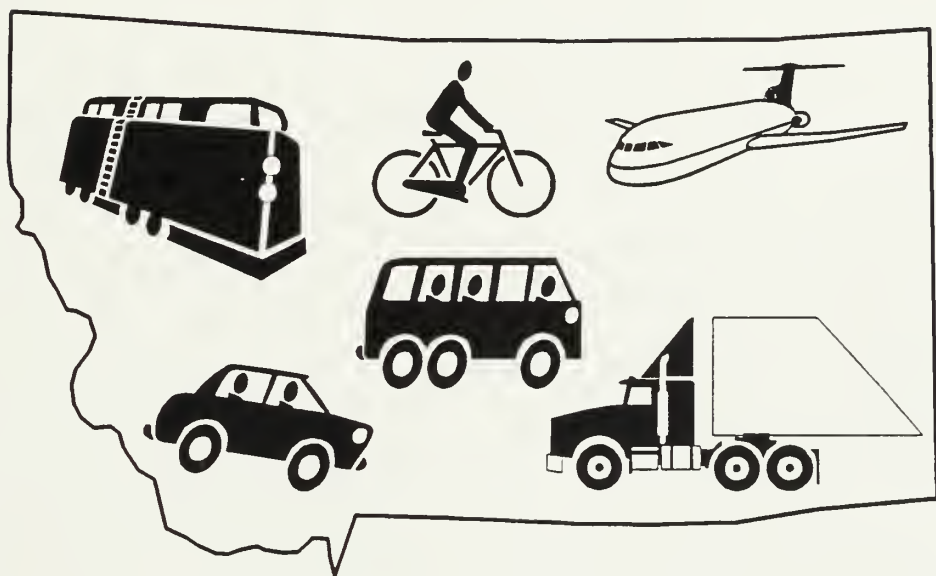
	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
Action B.3. Address priority grade separation needs at busy railroad crossings.	2	4			1	
Action B.4. Retain existing rights of way in rail corridors.	4	3	1		1	
POLICY GOAL C - Improve Intermodal Connectivity Through Increased use of Intermodal Freight Facilities	3	3				
Action C.1. Encourage the use of and improve the performance of existing intermodal facilities.	2	5	2			
Action C.2. Encourage the use of existing truck/rail reload facilities.	2	6	1			
Action C.3. Determine the feasibility of state provision of rail cars.	1	2	2	3		
Action C.4. Ensure MDT has in-house modal expertise to address freight issues associated with Interstate Commerce Commission (ICC) requirements.	1	4	1	1		
ACCESS MANAGEMENT CHOICES						
POLICY OPTION A: Retain the existing Access Management Plan Approach.		2	1	3	3	
Action A.1. Do not regulate highway access further.		2		4	5	
POLICY OPTION B: Strengthen use of access controls in fast growing areas.	2	6				
Action B.1. Establish a classification scheme for access management.	2	8	1			
POLICY OPTION C: Develop and implement a comprehensive access management plan.	7	3	2			
Action C.1. Identify areas and corridors within the State that require rapid action and pursue a "jump start" program to address them.	7	7				
Action C.2. Identify corridors likely to require expansion or reconfiguration for access management purposes.	4	8				
POLICY D: Establish and fund a level of travel demand forecasting that will support an access management program.	6	4	1	1		

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
LAND USE CHOICES						
POLICY OPTION A: Do not address land use on a case by case basis.	1	2	2	1	3	
POLICY OPTION B: Encourage local jurisdictions to undertake land use planning to manage transportation demand.	6	4	1	1		
Action B.1. Work with local jurisdictions to establish a consistent approach.	7	5	1	1		
Action B.2. Establish and fund technical assistance for local jurisdictions to undertake land use planning.	7	4	1	2		
POLICY OPTION C: Provide authority to require developers to pay for resulting traffic demands.	10	3	1			
POLICY OPTION D: Enact legislation supporting land use planning in fast growing counties.	10	2	1	1		
PUBLIC TRANSPORTATION CHOICES						
POLICY GOAL A: Support Increased Use of Public Transportation Systems	5	2				
Action A.1. Develop promotional/educational programs to publicize public transportation opportunities.	5	6				
Action A.2. Ensure highway improvements address public transportation needs.	8	3				
Action A.3. Provide state-level funding support for transit.	7	1	1			
Option A.3.a. Allow transit projects to compete with highway improvement for funding.	2	4	3	2		
POLICY GOAL B: Preserve Existing Intercity Public Transportation Service.	2	5				
Action B.1. Identify the most effective actions.	5	3	2			
Action B.2. Evaluate the costs and feasibility of funding new intercity service in unserved areas.	5	3	1	1		
Action B.3. Implement a "rural ridesharing" demonstration program.	5	6				
Action B.4. Improve intermodal passenger facilities.	6	3	2			
Action B.5. Coordinate with Amtrak to facilitate increased use of rail and preservation of existing service levels.	8	2	1			

	Strongly Support	Support	Uncertain	Oppose	Strongly Oppose	No Opinion
POLICY GOAL C: Improve Service to Social Service Passengers.	4	4	1			
Action C.1. Ensure state agencies coordinate service provision.	5	5	1	1		
Action C.2. Investigate the need to facilitate easier entry into passenger service provision.	5	4	2			
POLICY GOAL D: Implement Transportation Demand Management (TDM) Actions that will Work in Montana.	6	3		1		
Action D.1. Encourage transit providers to include demand-side strategies in their development plans.	6	3	1	1		
Action D.2. Work with other state agencies to develop a TDM program for state government.	6	3	1	1		
BICYCLE AND PEDESTRIAN CHOICES						
POLICY OPTION A: Institutionalize Bicycle and Pedestrian Modes.	5	4				
Action A.1. Develop the State Bicycle and Pedestrian program.	6	4				
Action A.2. Prepare a bicycle related tourist guide.	5	3	2			
Action A.3. Establish an advisory committee.	5	4	2			
Action A.4. Disseminate public service announcements addressing bicycle and pedestrian safety.	6	4				
POLICY GOAL B: Make Targeted Bicycle-related Improvements.	8	1				
Action B.1. Identify a network of bicycle routes to provide the basis for planning and system improvement decisions.	8	2				
Action B.2. Improve bicycle facilities in Montana	9	1				
Action B.3. Adopt and implement consistent bicycle-friendly maintenance standards.	8	2				
Action B.4. Preserve the designated bicycle network in a generally smooth, clean, and safe condition.	9	1				

Montana Department of Transportation

TranPlan 21



Public Opinion Survey Results

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INTRODUCTION

This report summarizes the methods and findings of a telephone survey conducted for the Montana Department of Transportation. The purposes of the survey were to determine the opinion of Montana residents about the current state of transportation in Montana and to obtain the opinions of Montana residents about how to prioritize future action by the Montana Department of Transportation.

The survey was conducted with the 6 station Computer Assisted Telephone Interviewing Laboratory at Montana State University, Billings from November 9, 1994 to November 18, 1994. Trained interviewers completed 710 interviews with randomly selected adult residents of Montana.

METHODOLOGY

A random digit dialing sampling technique was used to generate the sample. In order to complete 710 interviews, a total of 3,877 telephone calls were made to 2,723 telephone numbers. Table One shows the disposition of all the telephone calls. When a particular call resulted in no answer, an answering machine or was busy, the number was recalled up to five times in order to attempt to complete an interview. When a potential respondents said they were busy, the interviewer attempted to schedule a time for a call back.

TABLE ONE
DISPOSITIONS OF ALL TELEPHONE CALLS

No Answer	918	23.7%
Busy	261	6.7%
Answering Machine	347	9.0%
Fax or Computer	98	2.5%
Non Working Number	547	14.1%
Non Residential Number	182	4.7%
Hearing Problem	12	.3%
Language Problem	5	.1%
Incompetent Respondent	18	.5%
Refused	453	11.7%
Call Backs	295	7.6%
Wrong Category	15	.4%
Hung Up	12	.3%
Argumentative	4	.1%
Completed	710	18.3%

Upon completion of the interviews, the data was electronically transferred to the VAX mainframe computer at MSU, Billings. The computer program SPSS (Statistical Package for the Social Sciences) was used to analyze the data

FINDINGS

The Respondents

Table Two summarizes the demographic characteristics of the respondents. As Table Two shows, the respondents were about half male and half female. Ages of respondents ranged from 18 to 88 with a mean of 44.8. Table Two shows that 37.7% of the respondents had received a college degree and another 29.2% had some college education. The mean educational level of the respondents was 14.1 years of formal education.

TABLE TWO
DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

Sex		
Male	352	49.8%
Female	355	50.2%

Age		
18-25	60	8.6%
26-35	159	22.7%
36-45	176	25.2%
46-55	133	19.0%
56-65	87	12.4%
66-75	62	8.9%
Over 75	22	3.1%

Mean Age = 44.8

Educational Attainment

Not High School Grad	35	5.0%
High School Grad	233	33.1%
Some College	205	29.2%
College Grad	155	22.0%
Grad Work	75	10.7%

Mean Educational Level = 14.1

Born in Montana

Yes	366	52.0%
No	338	48.0%

How Long in Montana?

Less than 5 Years	54	16.0%
5-10	59	17.5%
11-20	77	22.8%
21-30	71	21.0%
31-40	31	9.2%
Over 40 Years	46	13.6%

Mean Years in Montana for Non Native Montanans = 20.9

Montana State Department of Transportation Financial District of Residence

District One	185	26.2%
District Two	133	18.8%
District Three	161	22.8%
District Four	63	8.9%
District Five	165	23.3%

Table Two shows that 52% of the respondents were born in Montana while 48% were not. The respondents who were not born in Montana were asked how long they had been in the state. Table Two shows the average length of time in the state for non native Montanans was 20.9 years.

Finally, Table Two shows that 26.2% of the respondents lived in Montana State Department of Transportation Financial District 1 (Lincoln, Flathead, Sanders, Mineral, Missoula, Ravalli, Granite, Powell, and Lake counties), 18.8% lived in State Transportation Financial District 2 (Beaverhead, Madison, Deer Lodge, Silverbow, Jefferson, Broadwater, Meagher, Gallatin, and Park counties), 22.8% lived in Financial District 3 (Glacier, Pondera, Teton, Lewis and Clark, Cascade, Toole, Chouteau, Liberty, Hill and Blaine counties), 8.9% lived in Financial District 4 (Phillips, Valley, Daniels, Sheridan, Roosevelt, Richland, McCone, Garfield, Dawson, Prairie, Rosebud, Fallon, Custer, Powder River, Carter, and Wibaux counties) and 23.3% lived in Financial District 5 (Bighorn, Treasure, Stillwater, Sweetgrass, Wheatland, Yellowstone, Golden Valley, Petroleum, Fergus, Musselshell, Judith Basin, and Carbon counties).

Respondent Perception of Transportation in Montana

The respondents were asked to rate their level of satisfaction with 12 different components of transportation in Montana. In making these ratings, the respondents were asked to use a scale of 1 to 10 where 1 was very unsatisfied and 10 was very satisfied. Table Three summarizes the results of the ratings. The first number after each item in Table Three is the number of

respondents providing a rating for the item and the second number is the mean rating given the item. The order of items in Table Three is based on the mean score on the 1 to 10 scale.

TABLE THREE
RESPONDENT SATISFACTION WITH TRANSPORTATION
SYSTEM COMPONENTS

Interstate Highways	694	7.40
Shipping Freight	585	7.13
Out of State Air	577	6.69
Special Transportation	386	6.14
In State Air	393	5.72
Local Transit	254	5.57
Pedestrian Walkways	623	5.39
Other Highways	678	5.23
City Streets	700	4.87
Between City Buses	266	4.81
Amtrak	278	4.78
Bicycling Facilities	465	4.61
Overall 700	6.20	

Table Three shows the transportation component rated highest by respondents was interstate highways with a mean of 7.40 followed by shipping freight (7.13), out of state air transportation (6.69), special transportation (6.14), in state air transportation (5.72), local transit systems (5.57), pedestrian walkways (5.39) and other highways (5.23). All of the above items were rated higher than 5, meaning their rating fell into the satisfied side of the scale. Four items, bicycling facilities, Amtrak, between city buses and city streets were rated less than 5.

Table Three also shows that the overall level of satisfaction with transportation in Montana was 6.2.

In order to determine if there were differences in the ratings of these items by respondents living in different State Transportation Financial Districts, statistical testing was performed. Statistically significant ($p=.05$) differences were found between Financial Districts in the ratings of 8 items. Table Four summarizes these statistical differences.

Table Four shows that Financial District 1 respondents rate interstate highways highest while Financial District 4 respondents rate interstates the lowest. Table Four shows a similar pattern for shipping freight and instate air transportation. Respondents in Financial District 5 rate out of state air transportation the highest while Financial District 3 respondents rate out of state air the lowest. Respondents in Financial District 5 also rate local transit the highest while Financial District 4 respondents rate local transit the lowest. Financial District 2 respondents rate other highways highest while Financial District 4 respondents rate other highways the lowest. City streets are rated highest by respondents in Financial Districts 3 and 4 and rated the lowest by Financial District 2 respondents. Amtrak is rated the highest by Financial District 1 and 4 respondents and rated the lowest by Financial District 2 and 5 respondents.

TABLE FOUR
MEAN SATISFACTION RATING BY FINANCIAL DISTRICT FOR SIGNIFICANT ITEMS

	Finan Dist 1	Finan Dist 2	Finan Dist 3	Finan Dist 4	Finan Dist 5
Interstates	7.72	7.30	7.18	6.95	7.54
Shipping Freight	7.40	7.37	6.96	6.46	7.08
Out of State Air	6.79	6.78	6.25	6.37	7.08
In State Air	6.32	5.79	4.96	4.94	6.18
Local Transit	5.52	4.24	5.77	4.10	6.95
Other Highways	5.26	5.63	5.29	4.63	5.05
City Streets	4.73	4.36	5.17	5.15	5.05
Amtrak	5.51	3.37	5.25	5.43	3.66

Next the respondents were presented with a list of 23 possible problem areas in transportation and were asked how serious a problem each area was. In their rating of each item, respondents were asked whether the item was not a problem, a small problem, a moderate problem, or a serious problem. Table Five summarizes the results of this evaluation. The order of items in Table Five is based on the mean score on a 1 to 4 scale where 1 is not a problem, 2 is a small problem, 3 is a moderate problem and 4 is a serious problem. All of the problem areas received a mean score between 2 and 3 except for highway approaches which received a score of 1.93.

Table Five shows the availability of passenger service is considered the most serious problem by respondents with a mean rating of 2.99. Table Five further shows that 47.3% of the respondents rated the availability of passenger rail service as a serious problem. Table Five shows the next most serious problem was traffic resulting from population growth followed by the condition of bus depots, and then the condition of roads other than interstates. These four problem areas all received mean scores greater than 2.92.

Low transit use, availability of rural air service, and bicycle facilities make up a second level of area of concern with mean scores of between 2.75 and 2.77. Traffic congestion and connections between different types of transportation were also provided mean ratings greater than 2.50. Single occupancy vehicles, inter city bus availability, rail freight service and local transit availability constitute the next level of concern with mean ratings between 2.44 and 2.48.

Aside from the lack of concern about highway approaches, the condition of interstates, the environmental impact of construction, and on road freight service were problem areas for which the respondents expressed little concern.

TABLE FIVE
RESPONDENT ASSESSMENT OF TRANSPORTATION PROBLEM AREAS

	Not a Problem	Small Problem	Moderate Problem	Serious Problem	N	Mean
Passenger Rail Avail	17.8%	12.9%	21.9%	47.3%	488	2.99
Traffic from Growth	16.7%	11.8%	31.0%	40.5%	654	2.95
Bus Depot Condition	16.4%	16.1%	25.6%	41.9%	360	2.93
Other Road Condition	8.0%	19.7%	44.8%	27.5%	687	2.92
Low Transit Use	17.1%	18.5%	34.5%	29.8%	362	2.77
Rural Air Avail	19.8%	17.3%	28.6%	34.4%	434	2.77
Bicycle Facilities	20.5%	18.0%	27.8%	33.7%	561	2.75
Traffic Congestion	26.4%	13.3%	28.4%	31.8%	682	2.66
Trans Connection	23.8%	19.0%	33.5%	23.6%	483	2.57
1 Occupant Vehicle	31.9%	13.1%	29.8%	25.2%	634	2.48
Inter City Bus Avail	28.8%	18.6%	29.1%	23.5%	371	2.47
Rail Freight Service	31.7%	17.1%	24.8%	26.4%	375	2.46
Local Transit Avail	32.4%	16.4%	25.7%	25.5%	377	2.44
Transit Scheduling	35.7%	14.4%	29.7%	20.1%	333	2.34
Pedestrian Walkway	32.3%	20.8%	27.7%	19.1%	638	2.34
Support Econ Devop	28.4%	23.1%	35.3%	13.2%	592	2.33
Air Service Avail	32.8%	19.0%	33.9%	14.3%	537	2.30
Air Quality	34.3%	21.2%	27.4%	17.1%	645	2.27
Transport Safety	35.1%	19.0%	33.9%	12.0%	643	2.23
On Road Freight	40.1%	17.8%	28.7%	13.4%	596	2.15
Constr Envir Impact	39.6%	21.1%	27.1%	12.2%	641	2.12
Interstate Condition	38.9%	25.3%	30.0%	5.8%	684	2.03
Highway Approaches	49.0%	19.0%	21.6%	10.4%	663	1.93

Each of the items in Table Five was crosstabbed against State Transportation Financial District to see if there were any statistically significant differences in the way in which respondents in different Financial Districts rated the problems. Statistical differences were found in the ratings of 10 of the items. Table Six summarizes these differences. Table Six shows the percentage of respondents in each Financial District believing each of the 10 items was a serious problem.

Table Six shows respondents in Financial District 5 are the most concerned about passenger rail availability while respondents in Financial District 3 are the least concerned. Respondents in Financial District 1 are the most concerned about the increase in traffic from population growth while respondents in Financial District 4 have little concern about such increase in traffic. A similar pattern was found with traffic congestion, single occupancy vehicles, and air quality impacts from road use.

The respondents in Financial Districts 2, 4 and 5 are the most concerned about the condition of bus depots while respondents in Financial District 1 and 3 are the least concerned. Respondents in Financial District 4 are the most concerned about local transit availability and scheduling while the respondents in Financial District 5 are the least concerned about these issues.

TABLE SIX
PERCENTAGE OF RESPONDENTS BELIEVING ITEM
IS A SERIOUS PROBLEM BY FINANCIAL DISTRICT

	Finan Dist 1	Finan Dist 2	Finan Dist 3	Finan Dist 4	Finan Dist 5
Passenger Rail Avail	41.4%	50.6%	33.1%	56.5%	63.2%
Traffic From Growth	65.5%	43.3%	25.7%	10.0%	32.9%
Bus Dept Condition	32.6%	47.1%	36.6%	51.7%	50.0%
Traffic Congestion	48.0%	36.7%	26.3%	6.9%	23.4%
1 Occupant Vehicles	38.2%	27.9%	21.5%	5.8%	19.6%
Local Transit Avail	30.5%	27.0%	19.6%	55.2%	12.5%
Local Transit Sched	22.7%	18.0%	18.6%	35.0%	15.6%
Pedestrian Walkways	21.5%	16.0%	14.1%	23.1%	22.4%
Air Quality	37.0%	12.0%	8.1%	1.9%	12.7%
Transportation Safety	18.8%	7.3%	8.7%	12.5%	11.6%

Respondent Evaluation of
Potential Montana Department of Transportation Action

The respondents were presented with a list of 25 possible action the Montana Department of Transportation could undertake. For each action, the respondents were asked whether they thought the action should have no priority, a low priority, a middle priority or a high priority. Table Seven summarizes the ratings of these actions. The order of items in Table Seven is provided by the mean score for each item on a 1 to 4 scale where 1 is no priority, 2 is low priority, 3 is middle priority and 4 is high priority.

Table Seven shows that 9 actions received a mean priority score of 3.0 or greater. These actions are: improve roads other than interstates, improve transportation safety, increase the capacity of the system, make sure highway improvements are pedestrian friendly, preserve branch rail road lines, ensure transportation for economic development, ensure adequate bicycling facilities, and changing the way people travel to save energy. An additional three items, promote transit use, improve interstates, and minimize the environmental impacts of road construction received mean scores between 2.93 and 2.98.

The lowest priority went to reducing the use of private vehicles and this was the only item to receive a mean score of less than 2.5.

TABLE SEVEN
RESPONDENT ASSESSMENT OF PRIORITY OF
DEPARTMENT OF TRANSPORTATION ACTION

	No Priority	Low Priority	Middle Priority	High Priority	N	Mean
Improve Other Roads	1.9%	9.4%	31.7%	57.0%	679	3.48
Improve Trans Safety	5.5%	10.0%	26.9%	57.7%	659	3.37
Increase Capacity	5.5%	13.3%	35.9%	45.4%	641	3.21
Pedest Friendly Imp	6.4%	15.2%	32.1%	46.4%	660	3.18
Preserve Rail Branches	5.7%	20.3%	31.7%	42.3%	558	3.15
Promote Rail Ser Use	6.3%	21.8%	31.6%	40.4%	560	3.06
Ensure Econ Devop	7.3%	17.0%	40.1%	35.6%	648	3.04
Ensure Adeq Bicycle	8.3%	18.1%	36.4%	37.2%	626	3.03
Change Travel Modes	9.7%	20.8%	29.2%	40.3%	660	3.00
Promote Transit	8.8%	20.9%	34.0%	36.4%	536	2.98
Improve Interstates	6.4%	23.9%	37.5%	32.2%	677	2.96
Minim Ewir Imp Constr	10.2%	20.8%	34.9%	34.1%	654	2.93
Retain RR Right Ways	8.8%	28.2%	32.2%	30.7%	602	2.85
Improve Bus Depots	11.8%	26.2%	26.6%	35.4%	458	2.86
Support Inter City Bus	8.5%	25.4%	39.6%	26.5%	520	2.84
Increase Carpooling	13.6%	22.9%	29.9%	33.5%	668	2.83
Prom Inter City Bus	9.8%	26.5%	36.6%	27.1%	528	2.81
Reduce Air Impact	14.0%	26.0%	33.3%	26.7%	649	2.73
Improve Road Freight	11.3%	27.1%	38.7%	22.9%	608	2.73
Reduce Congestion	10.5%	17.0%	23.8%	48.7%	451	2.72
Increase Transit Flex	11.8%	27.5%	38.6%	22.6%	451	2.72
PromoteAvail Air Ser	10.8%	31.7%	36.7%	20.9%	575	2.68
Ensure Rural Air	13.1%	29.8%	35.1%	22.0%	550	2.66
Reg Hghwy Approach	16.3%	28.7%	36.2%	18.9%	652	2.58
Reduce Private Vehicle	27.4%	35.1%	27.1%	10.4%	656	2.20

These items were also crosstabbed by State Transportation Financial District to determine if there were differences in the way respondents in different Financial Districts prioritized the items. Statistically significant differences were found in the way respondents from different Financial Districts prioritized 10 of the items. These differences are summarized in Table Eight. The numbers in Table Eight are the percentages of respondents in each Financial District who gave the item a high priority.

Table Eight shows respondents from Financial District 1 are the most likely to give increasing the capacity of our transportation system a high priority while Financial District 4 respondents are the least likely to give increasing capacity a high priority. A similar pattern of responses was found with changing travel modes, minimizing the environmental impacts of road construction, increasing carpooling, reducing the air quality impacts of road use, reducing traffic congestion, and increasing the flexibility of local transit.

Financial District 2 respondents were the most likely to assign a high priority to improving bus depots while Financial District 4 respondents were the least likely to assign a high priority to bus depots. A similar pattern was found with regulating highway approaches and reducing private vehicle use.

TABLE EIGHT
PERCENTAGE OF RESPONDENTS GIVING ITEMS
A HIGH PRIORITY BY FINANCIAL DISTRICT

	Finan Dist 1	Finan Dist 2	Finan Dist 3	Finan Dist 4	Finan Dist 5
Increase Capacity	53.5%	49.6%	37.3%	34.0%	44.4%
Change Travel Modes	46.9%	43.2%	32.0%	30.4%	41.1%
Minim Envir Imp Const	39.9%	35.7%	30.7%	25.0%	32.0%
Improve Bus Depots	30.3%	44.3%	31.6%	27.0%	40.6%
Increase Carpooling	41.1%	36.8%	27.5%	22.4%	31.8%
Reduce Air Impact	36.8%	23.6%	23.2%	12.0%	26.4%
Reduce Congestion	69.5%	51.6%	40.5%	16.7%	41.7%
Local Transit Flex	29.4%	21.8%	13.6%	6.1%	28.7%
Reg Hghwy Approach	18.2%	23.2%	18.4%	7.3%	19.7%
Reduce Private Veh	12.6%	15.2%	7.8%	1.9%	9.5%

The respondents were asked if they could think of any additional transportation related problems that could be addressed by the Montana Department of Transportation. These answers were recorded in one line of type as open ended answers. Table Nine summarizes the answers that were given by at least 3 respondents.

TABLE NINE
OTHER PROBLEM AREAS

Better Secondary Road Maint.	43	16.1%
More Passenger Rail service	25	9.3%
Widen Highway 93	24	9.0%
More Bus Service	21	7.9%
Weight/length Restrict on Trucks	19	7.1%
Better Traffic Law Enforcement	15	5.6%
More/Cheaper Air Service	13	4.9%
Widen State Highways	13	4.9%
Better Road Const Traffic Flow	10	3.7%
Repair Potholes in Cities	9	3.4%
Widen Billings-Great Falls Road	9	3.4%
More Bicycle-Pedestrian Access	9	3.4%
Improve 10th Ave in Great Falls	8	3.0%
Lower Fuel Taxes	8	3.0%
Better/Cleaner/More Rest Areas	6	2.2%

Table Nine (continued)

Control Drunk Driving	6	2.2%
Better School Bus Safety	6	2.2%
More Special Transportation	5	1.9%
Too Many Bicycles	4	1.5%
Better Access to Roads	4	1.5%
Stop lights instead of signs	4	1.5%
Deer Problem	3	1.1%
No enough taxis	3	1.1%

Table Nine shows that 16.1% of the responses concerned better maintenance of secondary roads in Montana and many of the respondents who provided this answer also specifically mentioned winter maintenance. The second most common answer was more or better passenger rail service (9.3%), followed by widen Highway 93 (9.0%), more bus service (7.9%), more weight and length restrictions on semi-trucks (7.1%), better enforcement of traffic laws (5.6%), more and cheaper air service (4.9%), widen state highways (4.9%), and better traffic flow during road construction (3.7%).

Respondents were asked if there was anything not happening with the state transportation system that they would like to see happen. This question was also asked in an open ended manner and answers up to one line of type in length were recorded. Table Ten summarizes responses to this question that were given by at least 3 respondents.

TABLE TEN
WHAT IS NOT HAPPENING THAT SHOULD BE HAPPENING

More Passenger Rail Service	46	18.2%
Better Secondary Road Maint	43	17.0%
More Bus Service	41	16.2%
More/Cheaper Air Service	21	8.3%
More Bicycle/Pedestrian Access	14	5.5%
Widen Highway 93	14	5.5%
Widen Highways	13	5.1%
Have Done a Good Job	10	3.9%
Weight/Length Restriction-Trucks	8	3.2%
Improve 10th Ave in Great Falls	7	2.8%
Better Enforcement of Laws	6	2.4%
Traffic Congestion In Bozeman	4	1.6%
Fix Potholes in City Streets	4	1.6%
More Signs on Highways	4	1.6%
More/Better Special Transport	3	1.2%
Widen Billings-Great Falls Road	3	1.2%
Widen Highway 2	3	1.2%
More/Cleaner/Better Rest Areas	3	1.2%

The answers in Table Ten point to the same basic areas as the answers in Table Nine: more and better rail service, better secondary road maintenance, more bus service, bicycle and pedestrian access, and widen state highways especially Highway 93. Table Ten also shows that 10 respondents praised the Department of Transportation for doing a good job.

The respondents were asked how important it was for the Department of Transportation to undertake three other actions: manage access to highways, help local jurisdictions with land use planning related to transportation and protect highway rights of ways for future expansion. Table Eleven summarizes the respondents answers to these three questions. The order of items in Table Eleven is provided by the mean score for each item on a scale where 1 is not important, 2 is somewhat important, 3 is important, and 4 is very important. Table Eleven shows that respondents judged managing access to highways the most important of these items, followed by helping local jurisdictions with land use planning and then protecting highway right of ways for future expansion.

TABLE ELEVEN
RESPONDENTS ASSESSMENT OF THREE ADDITIONAL ACTIONS

	Not Important	Somewhat Important	Important	Very Important	N	Mean
Manage Access	5.0%	17.4%	37.7%	39.8%	665	3.12
Local Land Use	7.6%	19.1%	40.4%	32.8%	643	2.98
Prot for Expan	5.9%	26.0%	35.2%	32.9%	647	2.95

No statistically significant differences were found in how respondents from different Transportation Financial Districts rated the importance of these items.

The respondents were asked to indicate if they supported or opposed spending monies raised from fuel taxes and vehicle registration fees on 7 different activities. In indicating their level of support for each activity, respondents were asked whether they strongly opposed, opposed, supported or strongly supported the activity. Table Twelve summarizes respondent support for these 7 activities. As with other tables, the order of the items in Table Twelve is based on the mean score for each item. In this table, the mean is on a 1 to 4 scale where 1 is strongly oppose, 2 is oppose, 3 is support, and 4 is strongly support.

Table Twelve shows the mean support ratings range from a high of 2.78 for bicycling and pedestrian improvements to a low of 2.24 for bus depot condition improvement.

TABLE TWELVE
RESPONDENT SUPPORT FOR EXPENDITURE OF
MONIES COLLECTED FROM FUEL TAXES AND VEHICLE REGISTRATION
ON TRANSPORTATION RELATED PROJECTS

	Strongly Oppose	Oppose	Support	Strongly Support	N	Mean
Bicycle & Pedestrian	5.9%	22.5%	59.4%	12.2%	662	2.78
Land Use Planning	4.2%	28.1%	60.2%	7.6%	620	2.71
Van Pools	7.5%	37.0%	48.0%	7.5%	654	2.55
Inter City Buses	8.8%	35.4%	50.4%	5.4%	633	2.52
Branch RR Lines	11.0%	46.8%	36.6%	5.6%	620	2.37
Rural Air Service	10.1%	49.3%	36.2%	4.5%	605	2.35
Bus Depots	14.2%	50.6%	31.7%	3.4%	618	2.24

These rating were also crosstabbed by Transportation Financial District to determine if any statistical differences existed in the way in which respondents from different Financial Districts supported each item. A statistically significant difference was found for the item with the highest support, bicycle and pedestrian improvements. The strongest support of this item came from Financial District 1 respondents while the strongest opposition came from Financial District 4 respondents. Financial District 5 and 2 respondents were the next most supportive of this item while Financial District 3 respondents offered the next highest level of opposition.

A nearly statistically significant difference was found in the next most supported activity of land use planning. The highest level of support for this activity came from Financial District 2 respondents.

The respondents were presented with 4 general alternative plans for the future of transportation in Montana. The four plans were: 1. No change from the way things are which would result in declining services; 2. Preserve the existing system and focus on maintaining today's system and services without addressing growth; 3. Maintain the current level of mobility and meet the increasing needs of the fastest growing areas; and 4. Develop a higher service multimodal system which would include considerable new investments in public transportation and highways.

The respondents were asked for their first and second choices among these alternative plans. Table Thirteen summarizes the respondents' choices. Table Thirteen shows the third alternative of meeting new needs was the top first choice of respondents and was mentioned by 66.8%. The second top choice was a multimodal system (24.2%). Table Thirteen shows that on second choice, 43.8% of the respondents mentioned a multimodal system while 29.4% selected the third alternative of meeting new needs.

When both the first and second choice are considered together, Table Thirteen shows that 92.2% of the respondents mentioned the third alternative of meeting new needs as either their number 1 or number 2 choice while 62% mentioned the multimodal system as either their first or second choice.

TABLE THIRTEEN
RESPONDENT EVALUATION OF FOUR ALTERNATIVE PLANS

First Choice

Meet New Needs	452	66.8%
Multimodal System	164	24.2%
Preserve System	46	6.8%
Make No Changes	15	2.2%

Second Choice

Multimodal System	256	43.8%
Meet New Needs	172	29.4%
Preserve System	139	23.8%
Make No Changes	18	3.1%

Both Choices

Meet New Needs	624	92.2%
Multimodal System	420	62.0%
Preserve System	185	27.3%
Make No Changes	33	4.9%

No statistically significant differences were found in the way in which respondents from different Financial Districts rated these 4 alternative plans.

SUMMARY

A telephone survey was completed with 710 randomly selected adult residents of Montana to find out what Montanans thought about the current state of transportation in Montana and to get public input on the future of transportation in Montana. Half the respondents were male and half were female. The mean age of respondents was 44.8, and the mean educational level was 14.1. Fifty two percent of the respondents were born in Montana and the average tenure in the state for those who weren't born here was 20.9 years. Twenty six percent of the respondents resided in Financial District 1, 18.8% in Financial District 2, 22.8% in Financial District 3, 8.9% in Financial District 4, and 23.3% in Financial District 5.

The respondents expressed the most satisfaction with interstate highways and the freight shipping capacity in Montana. They also seemed satisfied with out of state air transportation, special transportation, and to a lesser extent were satisfied with in state air transportation, local transit, pedestrian walkways and other highways. They expressed dissatisfaction with city streets, between city buses, Amtrak, and bicycling facilities. Respondents gave an overall mean rating of 6.2 on a 1 to 10 scale to transportation in Montana.

Respondents from different Financial Districts differed on their ratings of interstates, shipping freight, out of state air, in state air, local transit, other highways, city streets, and Amtrak.

When asked to rate the seriousness of 23 possible problem areas in transportation, passenger rail service was considered the most serious problem followed by increasing traffic from growth, bus depot condition, and the condition of highways other than interstates. Respondents expressed the least amount of concern about highway approaches, the condition of interstates, the environmental impact of construction, and on the road freight shipping.

Respondents from different Financial Districts differed in how they rated passenger rail availability, increased traffic from growth, the condition of bus depots, traffic congestion, 1 occupant vehicles, local transit availability, local transit scheduling, pedestrian walkways, air quality impacts from road use and transportation safety.

When respondents were asked to assign priorities to 25 possible future actions on the part of the State Department of Transportation, the highest priorities were assigned to improving roads other than interstates, improving transportation safety, increase the capacity of the system, pedestrian friendly highway improvements, and preserving branch railroad lines. The lowest priority was given to reducing private vehicle use followed by regulating highway approaches and ensuring rural air service.

Respondents from the different Financial Districts differed on the priorities they assigned to increasing capacity, changing the travel modes of people to save energy, minimizing environmental impacts of construction, improving bus depots, increasing carpooling, reducing air quality impacts of road use, reducing congestion, improving local transit flexibility, regulating highway approaches and reducing the use of private vehicles.

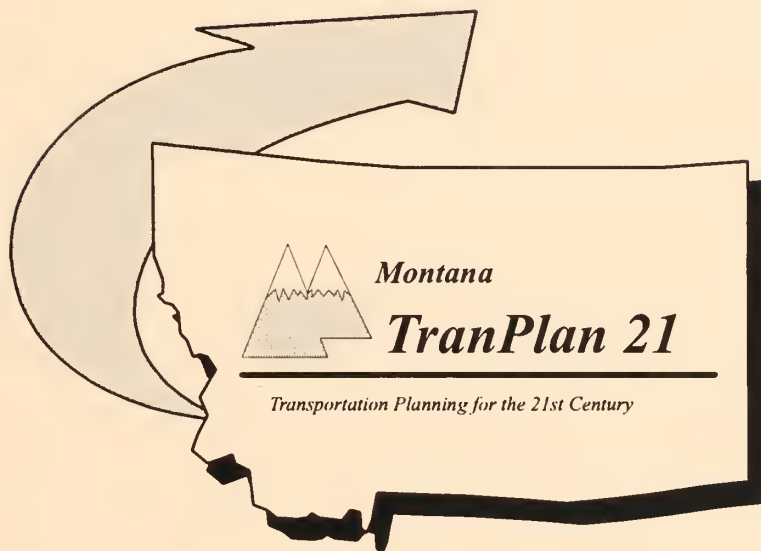
Respondents were asked what other problems existed with transportation in Montana. The most common answers to this question were: Maintenance of secondary state roads especially in the winter, the need for more passenger rail service, the need to widen state highways, especially Highway 93, more bus service, more restrictions on the weight and length of semi trucks, better enforcement of traffic laws, and more and cheaper air transportation.

Respondents believed that managing access to highways was more important than helping local jurisdictions with land use planning or protecting highway right of ways for future expansion, although all 3 activities were seen as important.

When asked their level of support for spending monies from fuel taxes and vehicle registration fees on 7 different activities, respondents supported bicycle and pedestrian related improvements the most, followed by land use planning, van pools and inter city buses. The least support went to improving the condition of bus depots.

The respondents first choice as a plan for the future of transportation in Montana is to maintain the current level of mobility and focus on meeting the new needs in the fastest growing areas. The second choice as a future plan was a high service, multimodal system.

Technical Appendix



Montana Department of Transportation
February, 1995

Prepared by:
Dye Management Group, Inc.

TRANPLAN 21 APPENDIX

CONTENTS



This appendix documents the methodologies that were used in the development of long range forecasts for TranPlan 21, details the data sources and methodologies used. The appendix provides technical detail in support of TranPlan 21.

A. Travel Model Documentation

The forecast future performance of Montana's highways and roadways are detailed in this section. This section also details the data inputs, forecasting methodologies, and results of the passenger rail (Amtrak) forecasting method. Two forecast models are presented, with the technique and results of each explained, and the rationale for the preferred model detailed.

B. Travel Forecast Results

The data inputs, forecasting methodology, and the results are presented in full detail. These results are shown in a spreadsheet that details the operating characteristics for the present and twenty years into the future.

C. Telephone Survey Instrument

The questionnaire used for the telephone survey is included.

D. Social and Economic Data

Data supporting the social-economic analyses and policy papers are presented in this section. These data provide additional detail to the information presented in TranPlan 21.

TRANPLAN 21 APPENDIX A
TRAVEL MODEL DOCUMENTATION



TRANSLATION OF
TRAVEL MODEL DOCUMENTATION

Report

Travel Model Documentation and Forecast Results

Prepared for

Montana Department of Transportation

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November 1994

1.0 Introduction

The material presented in this Appendix is the primary documentation of the Montana Statewide Travel Model Database (referred to as the Montana Database). The Montana Database was designed to forecast future transportation system travel demand and identify congested locations as part of the state of Montana Congestion Management System and Transportation Plan (TranPlan 21). Included in this Appendix are descriptions of the Montana Database structure, forecast results, CMS performance measure computations, and future data requirements.

2.0 Travel Model Database Structure

This section describes the Montana Database data inputs and sources, growth rate assumptions and calculations, and transportation system performance measure computations. The Montana Database includes historical traffic, socioeconomic data, roadway characteristics, growth factors developed from both historical traffic and socioeconomic data, base (1990) and future (2015) traffic volumes, and performance measure computations for the 3,362 roadway segment locations currently represented on the Montana Statewide Highway System.

■ 2.1 Inputs and Sources

The inputs used to develop the Database were collected from the following available data sources; the Montana Highway Information System (HIS) and the National Planning Association Data Services, Inc. (NPA). Input data related to traffic and roadway conditions were obtained from the HIS and relevant statewide socioeconomic data were obtained from the NPA. The sections presented below describe the information contained in each source and the relevant data used to develop the Montana Database.

2.1.1 HIS Data and Formats

This data was obtained from the Montana State Department of Transportation (MDT) and included historical Average Annual Daily Traffic (AADT) on the Montana Statewide highway network for rural interstates, primary arterials, and secondary arterials for 1983, 1984, 1986, 1988, 1990, and 1992. In addition, this data included information on roadway segment terrain, design speeds, and roadway geometrics. The HIS data records included an identifier field which specified the route number (FAI, FAP, or FAS) as well as the milepost number. Below are brief descriptions of how the data was used and formatted for input for use in the Montana Database.

- **1990 Base Year AADT.** This data was received in ASCII format and was imported into a database system using DBase IV Software. A county code was added to this database to provide a link between this data and the other traffic and socioeconomic data sets used to develop the Montana Database. The 1990 AADT volumes comprised the base

year traffic data for the statewide highway system. This data was used as the basis for developing the future travel forecasts.

- **Historical AADT (1983-1992).** This data was received in ASCII format and was imported into a single database. The same county code, as described above, was also added to each of the 4,400 records so that this information could be linked to the other data sets.
- **Base Year Geometric Data.** This data was received in ASCII format containing both the HIS roadlog and sufficiency files. The roadlog file had approximately 6,400 records, and was sorted with the historical HIS AADT records for only those locations with corresponding AADT counts. The sufficiency file had approximately 2,000 records and was also sorted with the corresponding historical HIS AADT data. This data was used to compute and analyze current and future travel forecasts related to highway system performance including measures such as vehicle miles traveled, volume-to-capacity ratios, and level of service.

This information was formatted into a database structure designed to develop future forecasts of AADT and to compute transportation system performance measures for use in the Statewide CMS and Transportation Plan. As noted previously, the final Montana Database has a total of 3,362 records which is significantly smaller than the original HIS database. This was due to the exclusion of all records (locations) with an urban identifier (a "U" in the segment id code) as well as those locations not containing consistent elements of historical data. Therefore, the Montana Database contains approximately 740 fewer records than the HIS traffic file.

2.1.2 National Planning Association Data and Formats

This data was obtained from the National Planning Association Data Services, Inc. (NPA). NPA provides socioeconomic forecasts for various states throughout the country including the state of Montana. This information is currently being used by the State of Montana Department of Commerce for socioeconomic forecasting purposes. The data includes population by age group, household size, number of households, and average household income by Montana County for 1990, 2000, and 2010. Also, NPA information included employment levels for the following 11 industry types:

- farming;
- mining;
- construction;
- manufacturing;
- transportation/communication/public utilities;
- wholesale trade;
- retail trade;
- finance/insurance/real estate;
- services;
- government (federal civilian, federal military, and state and local); and
- other (agriculture services, forestry, and fisheries).

This information was provided at the county level for travel forecasting purposes. It should be noted that this county level information was aggregated to the Montana Highway District level to represent the basic traffic analysis areas within the Montana Database. In addition, the employment data was aggregated into two groups, retail and non-retail employment.

■ 2.2 Formats for Inputting Existing and Future Data

The Montana Database includes 1990 base year AADT volumes and forecast year 2015 AADT volumes. The 1990 base year volumes were obtained directly from the HIS database for input into the Montana Database. The year 2015 volumes were calculated by applying the Highway District-specific traffic growth factors (see Section 2.3 for detailed description of the methods used to develop growth factors) to the 1990 base year AADT volumes. Location-specific seasonal adjustment factors were not applied to the forecasts (these factors were based upon adjusted AADT developed by MDT using statewide adjustment factors).

The Montana Database contains 3,362 total records (e.g., count locations) with the following field variables and database structure shown in Table 1:

- Route Number;
- County Name;
- Highway District;
- Mile Post;
- 1990 AADT;
- Growth from 1992 to 2015;
- Annual-Compounded Growth Factor;
- 2015 AADT;
- Commercial Vehicle Percentage;
- Commercial Vehicle 1990 AADT;
- Commercial Vehicle 2015 AADT;
- 1990 V/SF (LOS C);
- 1990 Delay Flag;
- 2015 V/SF (LOS C);
- 2015 Delay Flag;
- 1990 VMT; and
- 2015 VMT.

The federal aid system designation for roadways within the Montana Database was used rather than the functional classification system because at the time the database was developed, the functional classification information was not fully translated within HIS. However, upon completion of the functional classification transition, MDT can easily import additional classification field into the Montana Database for this purpose.

■ 2.3 Forecast Growth Factor Development

The forecast traffic growth factors were based upon historical traffic volumes from HIS and employment growth from NPA, in addition to future employment projections specified in the NPA dataset. Employment growth, rather than population or a combination of population and employment, was used as the basis for developing the forecast growth factors. Employment was used because it displayed a stronger historical relationship to traffic growth throughout much of the State than did population.

Table 2 shows the annual-compounded forecast traffic growth factors from 1992 to 2015 for each of the five Montana Highway Districts. Table 2 also shows the total forecast percentage growth from 1992 to 2015 on the Interstate, Federal Aid Primary, and Federal Aid Secondary Roadway Systems. A composite (total) percentage growth factor for each of the five Highway Districts over the same time periods is also described in this table. The following sections describe the variations of this basic approach developed to forecast growth factors for each of the five Montana Highway Districts.

2.3.1 Highway Districts 1 through 3

Highway Districts 1 through 3 exhibited a strong correlation between historical traffic growth and employment growth for the 10 year period from 1983 to 1992. The method used to calculate the 2015 growth factors for these Highway Districts combined the historical growth of traffic from 1983 to 1992 with the forecast percentage growth in employment for the years 1992 to 2015. This results in a future growth factor that is lower than the historical traffic growth rates from 1983 to 1992, but higher than growth based solely on future employment forecasts.

2.3.2 Highway Districts 4 and 5

Highway Districts 4 and 5 demonstrated different characteristics of traffic and employment growth from 1983 to 1992 than did Highway Districts 1 through 3. For example, in District 4, employment levels and traffic volumes dropped from 1983 to 1988. While employment levels continued to drop through 1990, historical traffic volumes increased (interstate volumes began to increase in 1986). From 1990 to 1992 employment levels also increased.

The economic downturn during the 1980s posed difficulties for using the basic approach for travel demand forecasting outlined above for Highway Districts 1 through 3. The area encompassing Highway District 4 experienced steady growth in employment prior to 1983. Because the historical data is not consistent with long term trends, a more suitable method to forecast future traffic growth was developed for this Highway District. The selected method applied the forecast employment growth percentage from 1992 to 2015 to the 1992 traffic volumes. This results in moderate traffic growth for the interstates, primary, and secondary roadways in Highway District 4.

For the Highway District 4 Interstates, this method substantially dampened the strong historical traffic growth which occurred between 1986 and 1992. Therefore, a forecast based upon a linear regression of the Interstate data from 1983 to 1992, including a drop in traffic volumes between 1983 and 1986, was developed. This method provided a strong, yet realistic forecast future growth factor. Traffic trends in this District should be monitored closely because the correlation between traffic and employment data are not as consistent as Highway Districts 1 through 3.

In Highway District 5, Interstate and Federal Aid Secondary roadway traffic volumes grew significantly between 1983 and 1992, while Federal Aid Primary roadway traffic volumes grew at a much slower rate (approximately the same rate of growth as employment). Within this historical growth trend, traffic volumes on the Federal Aid Primary roadways as well as employment levels dropped slightly from 1984 to 1987/1988. During this same period, Interstate traffic grew steadily. Federal Aid Secondary traffic, while experiencing a slight dip between 1986 and 1988, experienced significant growth.

Because of the unsteady relationship between the traffic and employment historical growth during the economic downturn in the early to mid-1980s, the same forecast method developed for Highway District 4 was applied for this District. The forecasts result in moderate future traffic growth for each of the roadway types in District 5.

Similar to the situation in District 4, the Interstate growth factors (and future volumes) were substantially dampened using this method. This was considered a credible method for I-94 (north/south into and out of North Dakota) which is not expected to experience substantial growth over the next twenty years. However, for Interstate 90, it was determined that a linear regression analysis of historical traffic data would be more realistic if applied to develop future travel forecasts. This method results in a more aggressive growth factor which concurs with the expectation that this corridor will continue to experience substantial growth.

The Federal Aid Secondary roadway growth is also dampened, however local employment trends tend to affect these roadways to a greater degree than the Interstates. As with Highway District 4, this district should be monitored closely as the correlation between traffic and employment data are not as consistent as shown in Highway Districts 1 through 3.

Table 1. Montana Database Field Descriptions

Field Name	Type	Width	Dec	Index	Description
LOCATION	Character	15		N	Location identifier links to other files in the HIS system
GEO_ZONE	Numeric	11		N	Geographic but we didn't receive it.
CO_NAME	Character	16		N	County name linked with the geographic identifier.
FAC_NAME	Character	8		N	Federal Aid Number
TYPE	Character	2		N	Type of Roadway: I= Interstate P= Primary S= Secondary
MT_DIST	Numeric	3		N	Montana District (There are 5 districts.)
MI_PST	Numeric	8		3	Mile Post
LANES	Numeric	3		N	Number of lanes
PST_RT	Character	8		N	Posted Route
AADT_90	Numeric	7		N	1990 AADT
AADT_75	Numeric	7		N	MDT only has a hard copy of 1975 traffic data. THT randomly entered volumes for 6-8 locations.
MGF92_15	Numeric	7		3	1992-2015 Growth Factors for Montana Districts created using regression/stream lining.
MPT92_15	Numeric	7		3	1992-2015 Compounded annual growth factors.
MAADT_15	Numeric	10		N	Projected 2015 AADT using the above growth factors.
COM_90	Numeric	7		3	1990 Percentage of commercial vehicles volume.
DHV_90	Numeric	7		3	1990 Percentage for the design hourly volume.
COM15	Numeric	7		N	2015 Percentage of commercial vehicles volume.
DHV15	Numeric	7		N	2015 Percentage for the design hourly volume.
DIST_NU	Numeric	7		3	Revised Distances used to calculate VMT.
MVCPK90	Numeric	7		2	1990 V/Sf based on Montana District Growth Factors
MVCPK15	Numeric	7		2	2015 V/Sf based on Montana District Growth Factors
MVMT2_90	Numeric	10		N	1990 VMT based on Montana District Growth Factors
MVMT2_15	Numeric	7		N	2015 VMT based on Montana District Growth Factors
SURFLOWC	Numeric	7		2	surface flow level of C
DELAY90C	Character	1		N	Delay Flag for 1990 LOS of C
DELAY_C	Character	1		N	Delay Flag for 2015 LOS of C using MAADT_15.
LEN	Numeric	5		N	length (1808 records)
TERRAIN	Numeric	5		N	Terrain Classification (419 records)

Source: Cambridge Systematics, Inc.

Table 2. Montana Growth Factors by Highway District

Highway District	Annualized Growth Rate 1992 to 2015 (1)	Percentage Growth from 1992 to 2015 (2)	
1	1.75%	Total	49%
		Interstate	54%
		Primary	46%
		Secondary	53%
2	2.01%	Total	58%
		Interstate	69%
		Primary	44%
		Secondary	63%
3	1.18%	Total	31%
		Interstate	47%
		Primary	28%
		Secondary	15%
4	0.65%	Total	16%
		Interstate	14%
		Primary	17%
		Secondary	15%
5	1.20%	Total	32%
		Interstate (3)	28%
		Primary	36%
		Secondary	30%

Notes:

- (1) Weighted annualized-compounded growth factors were calculated for each Highway District from 1992 to 2015. Forecasts were based upon historical traffic volumes and forecast growth in employment.
- (2) Percentage traffic growth from 1992 to 2015 for the Interstate, FAP, and FAS roadways were calculated for each Highway District. A weighted composite (total) of these three roadway percentages was also computed. Forecasts were based upon historical traffic volumes and forecast growth in employment.
- (3) For District 5, the growth percentage on Interstate 94 was projected to be 28%. Interstate 90 has a projected growth factor of 83%. The aggregate growth rate for District 5 is based on the Interstate growth percentage of 28%.

Source: Cambridge Systematics

3.0 Performance Measure Computations

The Montana Database was used to compute the following transportation system performance measures for use in the Montana CMS:

- Vehicle Miles Traveled (VMT);
- Service Flow Rate (SF);
- Volume to Service Flow Rate Ratio (V/SF); and
- VMT Under Congested Conditions.

This section describes the assumptions and methods used to calculate the transportation system performance measures shown above.

■ 3.1 VMT Computation

Vehicle miles of travel (VMT) was computed by multiplying the 1990 and 2015 AADT by the roadway segment length provided in the Montana Database. Total VMT were also computed by each functional class (interstates, primary, and secondary roadways), county, Highway District, and State of Montana.

■ 3.2 SF_c Computation

The service flow rate (SF_c) for level of service "C" was computed to identify the interstate, primary, and secondary roadway segments represented in the Montana Database that are above or below the designated threshold of congestion. SF_c is the maximum rate of flow (volume) on a particular roadway, under prevailing roadway and traffic conditions, at which level of service "C" can be maintained. The basic method used to calculate SF_c is defined in the 1985 Highway Capacity Manual (HCM). SF_c was calculated in a slightly different manner for each functional classification (interstate, primary, and secondary roadways) because of data availability and formula variations specified in the HCM for different functional classifications. Each of these calculations are represented in the Montana Database. Below is a description of each method.

3.2.1 Interstates

This SF_c calculation was based on formula 3-3 in the Basic Freeway Segments section of the HCM (as shown on page 3-11). The following assumptions, developed by MDT and Cambridge Systematics, were made for the interstates because of missing data:

- Terrain is level and grade = 0%;
- Lanes are 12 feet wide and shoulders are 6 feet wide;
- Design speed = 70 MPH; and
- Driver Population will be assumed to be commuters.

In addition, the following variables were used as inputs in the Interstate service flow rate formula:

- Percentage of Commercial Vehicles (input as percentage of trucks);
- Percentage of Recreational Vehicles (RVs);
- Percentage of Busses; and
- Number of Lanes.

A set of service flow rates were developed from these calculations which represent the range of roadway conditions for interstates in the state of Montana. These calculations are represented in the Montana Database.

3.2.2 Federal Aid Primary Roadways (FAP)

The HIS already includes calculations for SF_c for each level of service designation ("A through F"), as well as level of service for existing and forecast volumes on all primary roadways on the statewide system. The SF_c values were downloaded from the HIS directly into the Montana Database.

3.2.3 Federal Aid Secondary Roadways (FAS)

This SF_c calculation was based on formula 8-1 in the Rural Highways section of the HCM (as shown on page 8-8). Similar to the calculations conducted for the interstates, the following assumptions, developed by MDT and Cambridge Systematics, were made for the secondary roadways because of missing data:

- Terrain is level and grade = 0%;
- Percent no Passing Zones = 20%;
- Directional Distribution = 50/50 (assumed in HIS for FAP roadways);
- Percent of trucks = 14%;
- Percent of (Recreational Vehicles (RVs) = 4%; and
- Percent of Busses = 0%.

Percentages of trucks, RVs, and busses, as well as no passing zones, were based on default values from the HCM because the HIS does not contain this information. In addition, roadway width was used as a variable for SF_c for secondary roadways.

■ 3.3 Volume to SF_c Computation

The peak hour volume was calculated for each roadway segment by multiplying the forecast AADT by the Design Hour Volume (DHV) percentage provided in the HIS. This value (traffic volume) was then divided by the SF_c for each given functional classification. If this ratio was less than or equal to 1.0, then the roadway segment operates at level of service "C" or better and is considered uncongested. If the ratio was greater than 1.0, then the roadway segment operates at level of service "D" or worse and is considered congested.

■ 3.4 VMT Under Delayed Conditions

Each roadway segment which had a V/SF_c ratio greater than 1.0 was highlighted as a delayed condition. The VMT for these congested/delayed roadway segments (see Section 3.1 for the VMT computations) was then computed to identify the VMT by delay within the Montana Database. The delayed roadway segments were noted by an 'X' in the Delay Flag field of the Montana Database.

4.0 Commercial Vehicle Forecast Assumptions

Future forecasts for commercial vehicles were based on the current-year percentages of commercial vehicles because of limitations related to available data. These current-year percentages were applied to the 2015 AADT volumes for each roadway segment to compute the 2015 commercial vehicle volumes. Again, because of limited data, these forecasts were applied to interstate and primary roadways only.

5.0 Future Data Requirements and Needs

This section describes the steps and data required for updating the Montana Database. Typical update procedures described in the following sections include:

- Incorporation of new base year traffic data;
- Incorporation of new forecast growth rates; and
- Changes in Level of Service Standard.

MDT staff responsible for performing any updates to the Montana Database should read this technical Appendix, have a working knowledge of the software in which the Database is stored, have an understanding of the procedures of the 1985 HCM, and preferably, be familiar with the operations and output format of the HIS.

■ 5.1 Incorporation of New Base Year Traffic Data

The process for updating the base year traffic data is fairly straightforward, however, care must be taken that data are not placed in incorrect fields. The output of the HIS Traffic file lists AADT by year. The user should download the traffic file to an ASCII file and then convert this ASCII file into a separate database using similar software (dBase IV). The user should then update the Montana database with the separate AADT database by linking both databases using the location identifier. It may be necessary to make an intermediate step and delineate the data columns with a comma, space, or other marker. Most spreadsheet and database software allow the user to access ASCII files, and will place delineated data into separate columns.

An important aspect of this procedure is that the user should be certain the data is being placed in the correct record. As described in Section 2.1 of this Appendix, the Montana Database does not have the same number of records as the HIS traffic file. The HIS output data must be formatted such that the location and milepost fields are the same as the record into which the data is being imported.

■ 5.2 Incorporation of New Forecast Growth Rates

The inclusion of new growth factors into the Montana Database is an uncomplicated procedure. This explanation assumes that the factors are converted into a separate database and sorted by Highway District and functional classification (as are the current forecast growth factors). A simple database program can be written which appends the correct growth factor to records with the specified Highway District and functional classification designations.

The Montana Database must then be updated by calculating the corresponding annual growth factor (this may be done by program or formula). At this point, the future year forecasts and performance measures must also be updated. Table 3 shows examples of the simple database programs (in dBase IV language) mentioned above in this text.

■ 5.3 Changes in Level of Service Standard

For future Montana Database updates, it may be decided that changes in the level of service designation (currently "C") are required. Under such a scenario, the formulas developed to support the calculation of the Service Flow Rate (SF) will need to be modified. For the Federal Aid Primary roadways, downloading of the revised SF from the HIS into the Montana Database is required. Calculating SF revisions for interstates and Federal Aid Secondary roadways are described in the following sections.

5.3.1 Interstates

The methods used to calculate the SF formulas for interstates are shown in the HCM formula 3-3 on page 3-11 and Section 2.4 of this Appendix. Formula 3-3 is the basis for calculating the value that appears in the SF field for the interstate records in the Montana Database. Section 2.4 gives the assumptions that are included in the current equation. Other input assumptions and variables can be found or calculated based on Chapter 3 of the HCM. Once the revised assumptions have been determined, the SF can be calculated for each interstate record using the variables already represented in the Montana Database.

5.3.2 Federal Aid Secondary Roadways

The methods used to calculate the SF formulas are shown in the HCM formula 8-1 on page 8-8 of the HCM and section 2.4 of this Appendix. Formula 8-1 is the basis for calculating the value given in the SF field for the FAS records in the Montana Database. Section 2.4 gives the assumptions that are included in the current equation. Other input assumptions or variables can be found or calculated based on Chapter 8 of the HCM. Once the revised

assumptions have been determined, the SF can be calculated for each secondary record using the variables which are already in the Montana Database.

5.3.3 Federal Aid Secondary Multi-lane Roadways

On the Montana statewide highway system there is one FAS roadway represented in the Montana Database with four lanes. The Service Flow Rate for this roadway was calculated based upon Chapter 7 of the HCM, and Section 2.4 of this Appendix. Upon completing the changes to the two lane FAS roadways in the database, the revised SF for this roadway should be imputed manually.

Table 3. Examples of Simple dBase IV Database Programs

**** Recalculating '90 to '15 Data**

Import New Data

sele b

use ..\..\segrowth\gf92_15
index on geo_zone to temp

Update Forecasts

sele a
use traf153a
set relation to geo_zone into b
replace all gf90_15 with b->gf90_15 for geo_zone=b->geo_zone

replace all Maadt_15 with $aadt_{90} + (aadt_{90} * Mgf92_{15})$
replace all MPT92_15 with $((Maadt_{15} / aadt_{90})^{(1/23)}) - 1$

Source: Cambridge Systematics, Inc.

6.0 Forecast Results

The forecast results are given in the attached database summary printout. A brief overview of the results reveals that there are very few roadway sections in the system that are experiencing delay under 1990 existing or 2015 forecast conditions. A hardcopy of the entire Montana Database has been provided in this Section and is organized by route designation and county.

PASSENGER RAIL FORECASTING APPROACH



- **Data**

In forecasting passenger rail ridership in Montana for future years population projections from National Planning Association Data Services for the year 2015 were used to extend existing 1980, 1990 and, 1993 National Railroad Passenger Corporation (Amtrak) ridership data.

- **Methodology**

Two forecasts were calculated to estimate passenger rail ridership for the year 2015. The methodology for each is explained below. Each approach used the same calculation of population as an input variable.

Populations served by Montana Amtrak stations were determined in this forecasting approach as the total population of the county in which the station is located and those counties that are contiguous. In several cases there was more than one Amtrak station in a given county. The stations and their respective counties are listed:

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Station	Counties	Station	Counties
Wolf Point	Roosevelt Daniels Sheridan Richland McCone	Cut Bank	Glacier
		Browning	Glacier
		East Glacier	Glacier
Glasgow	Valley Garfield	Essex	Flathead Lake
Malta	Phillips Petroleum	West Glacier	Flathead Lake
Havre	Hill Blaine Choteau	Whitefish	Flathead Lake
Shelby	Toole Liberty Pondera	Libby	Lincoln Mineral

● **1993 Ridership Per Capita (Preferred Approach)**

This forecasting approach was based on existing ridership per population figures.

1. 1993 station ridership/1993 station service area population = X

This step calculated the ridership per capita ratio.

2. X*2015 Population = 2015 ridership

The forecast ridership at each Amtrak station in Montana was determined by multiplying "X", the 1993 ridership per capita ratio, by the 2015 projected population in the service area of each Amtrak station.

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- **1985-1993 Ridership Per Capita**

This forecast approach was performed to account for passenger rail ridership fluctuations over time. In this model, historic ridership per capita rates were determined for 1985 and 1993. These figures were utilized to determine an annual rate of change, which was applied through the year 2015.

Results from the 1985-1993 Ridership Per Capita forecasting approach were calculated using the following mathematical steps:

1. $1993 \text{ station ridership} / 1993 \text{ station service area population} = X$

This first step determined the ridership per capita for each station's service area in 1993.

2. $1985 \text{ station ridership} / 1985 \text{ station service area population} = Y$

This step determined the ridership per capita for each station's service area in 1985.

3. $(X - Y) / 8 = Z$

Subtracting the 1985 ridership per capita from the 1993 ridership per capita and dividing the result by 8 yielded the annual rate of change at each Amtrak station in Montana.

4. $(Z * 22) + X = 2015 \text{ Ridership Per Capita}$

The time period between 1993 and 2015 is 22 years. This length of time was multiplied by the annual rate of change yielded the 22 year ridership change. "X", the 1993 ridership per capita figure, was added to the 22 year ridership change to account for current ridership.

5. $2015 \text{ Ridership Per Capita} * 2015 \text{ Population} = 2015 \text{ Ridership}$

Multiplying the 2015 Ridership per capita ratio, from step 4, by the National Planning Association Data Services population projection for the year 2015 resulted with the forecast results for each station.

- **Results**

The results of the two projections differed considerably. The 1985-1993 Ridership Per Capita approach took into account several years of data, rather than the single year

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"snap-shot" used in the 1993 Ridership Per Capita method. However, the first (preferred) approach yielded what are believed to be more reliable figures.

The results of both methods have policy implications, but neither account for potential future changes in the rate of ridership. Therefore, changes in the level of service of Amtrak, or other modes, tourism factors, and other unforeseen influences could impact station and statewide ridership.

The results of the two forecasting approaches are shown in Exhibit A-1.

Exhibit A-1
Projected Passenger Rail Ridership
(Amtrak Empire Builder)

Station	1993 Ridership	1985-1993 Method			1993 Method		
		2015 Ridership	1993- 2015 Change	1993- 2015 Percent Change	2015 Ridership	1993- 2015 Change	1993- 2015 Percent Change
Browning	1,511	622	- 889	-58.8	1,658	147	9.7
Belton	5,616	11,618	6,002	106.9	7,263	1,647	29.3
Cut Bank	1,962	0	- 1,962	- 100.0	2,153	191	9.7
Essex	2,749	2,589	- 160	- 5.8	3,555	806	29.3
Glasgow	5,755	2,311	- 3,444	-59.8	5,275	- 480	- 8.3
Glacier Park	11,976	21,526	9,550	79.7	13,144	1,168	9.8
Havre	15,734	4,602	-11,132	- 70.8	16,203	469	3.0
Libby	4,072	4,564	492	12.1	4,400	328	8.1
Malta	3,109	1,359	-1,750	- 56.3	3,164	55	1.8
Shelby	14,282	25,119	10,837	75.9	14,177	- 105	- 0.7
Whitefish	63,391	146,394	83,003	130.9	81,984	18,593	29.3
Wolf Point	8,428	0	-9,194	-100.0	8,513	85	1.0
Total	138,585	220,704	82,119	59.3	161,590	23,005	16.6

Source: Calculated by Dye Management Group, Inc., using data from the National Railroad Passenger Corporation and National Planning Association Data Services.

TRANPLAN 21 APPENDIX B
TRAVEL FORECAST RESULTS



(Available Upon Request)

TRANSLAN 21 APPENDIX II
TRAVEL FORECAST RESULTS

Available Data: 1990-1991

TRANPLAN 21 APPENDIX C
TELEPHONE SURVEY INSTRUMENT



TRANSLAN 31 APPENDIX C

TELEPHONE SURVEY INSTRUMENT

Hello, my name is ____ and I am calling from Montana State University in Billings. MSU Billings has been hired by the Montana Department of Transportation to conduct a study of attitudes about the present condition of and future plans for transportation in Montana. Your telephone number was randomly selected and all answers to this questionnaire will remain anonymous. In order to interview the right person, I need to talk to the member of your household who is at home, over 18 and has had the most recent birthday. Would that be you? Would you have about 5 minutes to help us plan the future of transportation in Montana?

First I am going to name several different components of the transportation system in Montana. Please tell me how satisfied you are with each of the components using a scale of 1 to 10 where 1 is very unsatisfied and 10 is very satisfied.

3. Interstate highways
4. Other highways
5. City streets
6. Local transit systems
7. Buses between cities
8. Air transportation to destinations within Montana
9. Air transportation to destinations outside of Montana
10. Shipping goods or freight
11. Bicycling facilities
12. Pedestrian walkways
13. Specialized transportation for elderly and disabled
14. Amtrak

15. Now, using this same 1 to 10 scale, how satisfied are you with the overall transportation system in Montana?

Next, I am going to list a number of things which could be considered as possible problems with transportation in Montana. For each item I name, please tell me if you think it is:

1. Not a problem
 2. Small problem
 3. Moderate problem
 4. Serious problem
 5. Don't know
-
16. The physical condition of the interstates and major highways
 17. The physical condition of other roads and streets
 18. Availability of scheduled air services
 19. Availability of local transit services
 20. Availability of between city bus service such as Greyhound and Rimrock Stages
 21. The physical condition of bus depots

22. Additional traffic from population growth
23. The number of vehicles on the road with only one occupant
24. Connections between different types of transportation
25. The low use of urban transit systems
26. Traffic congestion
27. Local transit scheduling and route availability
28. Air transportation to rural areas
29. Adequate pedestrian walkways
30. Adequate bicycle facilities
31. Too many driveways and approaches onto major highways
32. Environmental impacts of highway construction and maintenance
33. Air quality impacts from road use
34. Supporting economic development with adequate transportation
35. On road freight moving capacity
36. Availability of passenger rail service
37. Rail freight service
38. Transportation safety

Now I am going to go back through this list phrasing each item in terms of actions which could be taken to solve the problem. Please tell me if you think the Montana Department of Transportation should assign **no priority, a low priority, a middle priority, or a high priority** to undertaking each action.

39. Improving the physical condition of interstates and major highways
40. Improving the physical condition of other roads and streets
41. Promoting the availability of scheduled air services
42. Promoting the use of between city buses
43. Improving the physical condition of bus depots
44. Increasing the capacity of the system in response to population growth
45. Attempting to increase ride sharing or carpooling
46. Promoting the use of urban transit systems
47. Reducing traffic congestion
48. Increasing the flexibility of local transit scheduling
49. Providing support for between city bus service
50. Ensuring air transportation to rural areas
51. Making sure highway improvements are pedestrian friendly
52. Ensuring adequate bicycle facilities
53. Regulating the number of highway driveways and approaches to preserve transportation corridors
54. Attempting to minimize the environmental impacts of highway construction and maintenance
55. Attempting to reduce private vehicle use
56. Reducing the air quality impacts of road use
57. Ensuring adequate transportation for economic development
58. Improving on road freight moving capacity

- 59. Promoting the use of existing passenger rail service
- 60. Changing the way people travel in order to save energy
- 61. Preserving rail branch lines
- 62. Improving transportation safety
- 63. Retain old rail road right of ways as recreational trails
- 64. Are there any other transportation related problems that you can think of which should be addressed by the Montana Department of Transportation?
- 65. Is there anything not happening with the transportation system that you would like to see happen?

Four alternative plans have been developed to guide the future of transportation in Montana. The first alternative is to make no changes from the way things presently are. This would result in declining facilities and services. The second alternative is to preserve the existing system and would focus on maintaining today's system and services without addressing growth. The third alternative is to maintain the current level of mobility. This choice would preserve today's system and meet increasing needs in Montana's faster growing areas. The fourth alternative is to develop a higher service multimodal system which would include considerable new investments in public transportation as well as highways.

66.-67. Could you please tell me which two of these alternatives you support the most, giving me the one you support the most first and then the one you support the second most.

In faster growing areas, how important is it for the Montana Department of Transportation to do each of the following?

- 68. Protect highway rights of way for future expansion
 - 1. Not important 2. Somewhat important 3. Important 4. Very Important
- 69. Manage access to highways along heavily traveled corridors
 - 1. Not important 2. Somewhat important 3. Important 4. Very Important
- 70. Help local jurisdictions with land use planning associated with transportation
 - 1. Not important 2. Somewhat important 3. Important 4. Very Important

Do you support or oppose putting motor fuel taxes and vehicle registration fees into:

- 71. Bus depots
 - 1. Strongly oppose 2. Oppose 3. Support 4. Strongly Support
- 72. Branch railroad lines
 - 1. Strongly oppose 2. Oppose 3. Support 4. Strongly Support
- 73. Between city bus service
 - 1. Strongly oppose 2. Oppose 3. Support 4. Strongly Support

74. Scheduled air service to rural areas

1. Strongly oppose 2. Oppose 3. Support 4. Strongly Support

75. Bicycle and pedestrian facilities

1. Strongly oppose 2. Oppose 3. Support 4. Strongly Support

76. Programs such as van pools to reduce the use of personal vehicles

1. Strongly oppose 2. Oppose 3. Support 4. Strongly Support

77. Assistance to local governments for land use planning associated with transportation

1. Strongly oppose 2. Oppose 3. Support 4. Strongly Support

As you probably know, different types of people have different opinions. The following questions are for statistical purposes only.

78. What is your age?

79. What is the highest level of education you have completed

80. Were you born in Montana?

81. If no, how long have you lived here

82. Respondents sex

Q#

Hello, my name is _____ and I am calling from Montana State University in . Billings. MSU Billings has been hired by the Montana Department of Transportation to conduct a study of attitudes about the present condition of and future plans for transportation in Montana. Your telephone number was randomly selected and all answers to this questionnaire will remain anonymous. In order to interview the right person, I need to speak with the member of your household who is at home, over 18, and has had the most recent birthday. Would that be you? Would you have about 5 to 10 minutes to help us plan the future of transportation in Montana?

IF BUSY, NO ANSWER, ETC., CTRL-END. 1ST 3 DIGITS & ENTER TO CONTINUE

Q# 3

First I am going to name several different components of the transportation system in Montana. Please tell me how satisfied you are with each of the components using a scale of 1 to 10 where 1 is very unsatisfied and 10 is very satisfied.

Interstate highways

TYPE THEIR ANSWER AND PRESS ENTER. USE 11 FOR DON'T KNOW OR DON'T USE AND 12 FOR NO RESPONSE

Q# 4

Other highways

TYPE THEIR ANSWER AND PRESS ENTER. USE 11 FOR DON'T KNOW OR DON'T USE AND
12 FOR NO RESPONSE

Q# 5

City Streets

TYPE THEIR ANSWER AND PRESS ENTER. USE 11 FOR DON'T KNOW OR DON'T USE AND
12 FOR NO RESPONSE

Q# 6

Local transit systems

TYPE THEIR ANSWER AND PRESS ENTER. USE 11 FOR DON'T KNOW OR DON'T USE AND
12 FOR NO RESPONSE

Q# 7

Buses between cities

TYPE THEIR ANSWER AND PRESS ENTER. USE 11 FOR DON'T KNOW OR DON'T USE AND
12 FOR NO RESPONSE

Q# 8

Air transportation to destinations within Montana

TYPE THEIR ANSWER AND PRESS ENTER. USE 11 FOR DON'T KNOW OR DON'T USE AND
12 FOR NO RESPONSE

Q# 9

Air transportation to destinations outside of Montana

TYPE THEIR ANSWER AND PRESS ENTER. USE 11 FOR DON'T KNOW OR DON'T USE AND
12 FOR NO RESPONSE

Q# 10

Shipping goods or freight

TYPE THEIR ANSWER AND PRESS ENTER. USE 11 FOR DON'T KNOW OR DON'T USE AND
12 FOR NO RESPONSE

Q# 11

Bicycling facilities

TYPE THEIR ANSWER AND PRESS ENTER. USE 11 FOR DON'T KNOW OR DON'T USE AND
12 FOR NO RESPONSE

Q# 12

Pedestrian walkways

TYPE THEIR ANSWER AND PRESS ENTER. USE 11 FOR DON'T KNOW OR DON'T USE AND
12 FOR NO RESPONSE

Q# 13

Specialized transportation for elderly and disabled

TYPE THEIR ANSWER AND PRESS ENTER. USE 11 FOR DON'T KNOW OR DON'T USE AND
12 FOR NO RESPONSE

Q# 14

Amtrak

TYPE THEIR ANSWER AND PRESS ENTER. USE 11 FOR DON'T KNOW OR DON'T USE AND
12 FOR NO RESPONSE

Q# 15

Now using this same 1 to 10 scale, how satisfied are you with the overall
transportation system in Montana?

TYPE THEIR ANSWER AND PRESS ENTER. USE 11 FOR DON'T KNOW OR DON'T USE AND
12 FOR NO RESPONSE

Q# 16

Next, I am going to list a number of things which could be considered as possible problems with transportation in Montana. For each item I name, please tell me if you think it is not a problem, a small problem, a moderate problem or a serious problem.

The physical condition of the interstates and major highways

1. Not a problem
 2. Small problem
 3. Moderate problem
 4. Serious problem
 5. Don't know or no response
-

Q# 17

The physical condition of other roads and streets

1. Not a problem
 2. Small problem
 3. Moderate problem
 4. Serious problem
 5. Don't know or no response
-

Q# 18

Availability of scheduled air services

1. Not a problem
2. Small problem
3. Moderate problem
4. Serious problem
5. Don't know or no response

Q# 19

Availability of local transit services

1. Not a problem
 2. Small problem
 3. Moderate problem
 4. Serious problem
 5. Don't know or no response
-

Q# 20

Availability of between city bus service such as Greyhound and Rimrock Stages

1. Not a problem
2. Small problem
3. Moderate problem
4. Serious problem
5. Don't know or no response

Q# 21

The physical condition of bus depots

1. Not a problem
 2. Small problem
 3. Moderate problem
 4. Serious problem
 5. Don't know or no response
-

Q# 22

Additional traffic from population growth

1. Not a problem
2. Small problem
3. Moderate problem
4. Serious problem
5. Don't know or no response

Q# 23

The number of vehicles on the road with only one occupant

1. Not a problem
 2. Small problem
 3. Moderate problem
 4. Serious problem
 5. Don't know or no response
-

Connections between different types of transportation

1. Not a problem
2. Small problem
3. Moderate problem
4. Serious problem
5. Don't know or no response

The low use of urban transit systems

1. Not a problem
 2. Small problem
 3. Moderate problem
 4. Serious problem
 5. Don't know or no response
-

Q# 26

Traffic congestion

1. Not a problem
2. Small problem
3. Moderate problem
4. Serious problem
5. Don't know or no response

Q# 27

Local transit scheduling and route availability

1. Not a problem
 2. Small problem
 3. Moderate problem
 4. Serious problem
 5. Don't know or no response
-

Air transportation to rural areas

1. Not a problem
2. Small problem
3. Moderate problem
4. Serious problem
5. Don't know or no response

Adequate pedestrian walkways

1. Not a problem
 2. Small problem
 3. Moderate problem
 4. Serious problem
 5. Don't know or no response
-

Q# 30

Adequate bicycle facilities

1. Not a problem
2. Small problem
3. Moderate problem
4. Serious problem
5. Don't know or no response

Q# 31

Too many driveways and approaches onto major highways

1. Not a problem
 2. Small problem
 3. Moderate problem
 4. Serious problem
 5. Don't know or no response
-

Q# 32

Environmental impacts of highway construction and maintenance

1. Not a problem
2. Small problem
3. Moderate problem
4. Serious problem
5. Don't know or no response

Q# 33

Air quality impacts from road use

1. Not a problem
 2. Small problem
 3. Moderate problem
 4. Serious problem
 5. Don't know or no response
-

Q# 34

Supporting economic development with adequate transportation

1. Not a problem
2. Small problem
3. Moderate problem
4. Serious problem
5. Don't know or no response

Q# 35

On road freight moving capacity

1. Not a problem
 2. Small problem
 3. Moderate problem
 4. Serious problem
 5. Don't know or no response
-

Q# 36

Availability of passenger rail service

1. Not a problem
2. Small problem
3. Moderate problem
4. Serious problem
5. Don't know or no response

Q# 37

Rail freight service

1. Not a problem
 2. Small problem
 3. Moderate problem
 4. Serious problem
 5. Don't know or no response
-

Q# 38

Transportation safety

1. Not a problem
2. Small problem
3. Moderate problem
4. Serious problem
5. Don't know or no response

Q# 39

Now I am going to go back through this list phrasing each item in terms of actions which could be taken to solve the problem. Please tell me if you think the Montana Department of Transportation should assign no priority, a low priority, a middle priority, or a high priority, to undertaking each action.

Improving the physical condition of interstates and major highways

1. No priority
 2. Low priority
 3. Middle priority
 4. High priority
 5. Don't know or no response
-

Q# 40

Improving the physical condition of other roads and streets

1. No priority
2. Low priority
3. Middle priority
4. High priority
5. Don't know or no response

Q# 41

Promoting the availability of scheduled air service

1. No priority
 2. Low priority
 3. Middle priority
 4. High priority
 5. Don't know or no response
-

Q# 42

Promoting the use of between city buses

1. No priority
2. Low priority
3. Middle priority
4. High priority
5. Don't know or no response

Q# 43

Improving the physical condition of bus depots

1. No priority
 2. Low priority
 3. Middle priority
 4. High priority
 5. Don't know or no response
-

Q# 44

Increasing the capacity of the system in response to population growth

1. No priority
2. Low priority
3. Middle priority
4. High priority
5. Don't know or no response

Q# 45

Attempting to increase ride sharing or carpooling

1. No priority
 2. Low priority
 3. Middle priority
 4. High priority
 5. Don't know or no response
-

Q# 46

Promoting the use of urban transit systems

1. No priority
2. Low priority
3. Middle priority
4. High priority
5. Don't know or no response

Q# 47

Reducing traffic congestion

1. No priority
 2. Low priority
 3. Middle priority
 4. High priority
 5. Don't know or no response
-

Increasing the flexibility of local transit scheduling

1. No priority
2. Low priority
3. Middle priority
4. High priority
5. Don't know or no response

Providing support for between city bus service

1. No priority
 2. Low priority
 3. Middle priority
 4. High priority
 5. Don't know or no response
-

Q# 50

Ensuring air transportation to rural areas

1. No priority
2. Low priority
3. Middle priority
4. High priority
5. Don't know or no response

Q# 51

Making sure highway improvements are pedestrian friendly

1. No priority
 2. Low priority
 3. Middle priority
 4. High priority
 5. Don't know or no response
-

Q# 52

Ensuring adequate bicycle facilities

1. No priority
2. Low priority
3. Middle priority
4. High priority
5. Don't know or no response

Q# 53

Regulating the number of highway driveways and approaches to preserve transportation corridors

1. No priority
 2. Low priority
 3. Middle priority
 4. High priority
 5. Don't know or no response
-

Q# 54

Attempting to minimize the environmental impacts of highway construction and maintenance

1. No priority
2. Low priority
3. Middle priority
4. High priority
5. Don't know or no response

Q# 55

Attempting to reduce private vehicle use

1. No priority
 2. Low priority
 3. Middle priority
 4. High priority
 5. Don't know or no response
-

Reducing the air quality impacts of road use

1. No priority
2. Low priority
3. Middle priority
4. High priority
5. Don't know or no response

Ensuring adequate transportation for economic development

1. No priority
 2. Low priority
 3. Middle priority
 4. High priority
 5. Don't know or no response
-

Q# 58

Improving on road freight moving capacity

1. No priority
2. Low priority
3. Middle priority
4. High priority
5. Don't know or no response

Q# 59

Promoting the use of existing passenger rail service

1. No priority
 2. Low priority
 3. Middle priority
 4. High priority
 5. Don't know or no response
-

Q# 60

Changing the way people travel in order to save energy

1. No priority
2. Low priority
3. Middle priority
4. High priority
5. Don't know or no response

Q# 61

Preserving rail branch lines

1. No priority
 2. Low priority
 3. Middle priority
 4. High priority
 5. Don't know or no response
-

Q# 62

Improving transportation safety

1. No priority
2. Low priority
3. Middle priority
4. High priority
5. Don't know or no response

Q# 63

Retaining old rail road right of ways as recreational trails

1. No priority
 2. Low priority
 3. Middle priority
 4. High priority
 5. Don't know or no response
-

Q# 64

Are there any other transportation related problems that you can think of which should be addressed by the Montana Department of Transportation?

TYPE IN THEIR ANSWER AND PRESS ENTER. YOU HAVE ONE LINE FOR THEIR ANSWER.

Q# 65

Is there anything not happening with the transportation system that you would like to see happen?

TYPE IN THEIR ANSWER AND THEN PRESS ENTER. YOU HAVE ONE LINE FOR THEIR ANSWER

Four alternative plans have been developed to guide the future of transportation in Montana. The first alternative is to make no changes from the way things presently are. This would result in declining facilities and services. The second alternative is to preserve the existing system and would focus on maintaining today's system and services without addressing growth. The third alternative is to maintain the current level of mobility. This choice would preserve today's system and meet increasing needs in Montana's faster growing areas. The fourth alternative is to develop a higher service multimodal system which would include considerable new investments in public transportation as well as highways.

Could you please tell me which two of these alternative you support the most, giving me the one you support the most first and then the one you support the second most.

1. Make no changes resulting in declining facilities and services
2. Preserve existing system without addressing growth
3. Maintain our current mobility and meet new needs in fast growing areas
4. Higher service multimodal system with considerable new investments
5. Don't know or no response

In faster growing areas, how important is it for the Montana Department of Transportation to do each of the following?

Protect highways rights of way for future expansion

1. Not important
 2. Somewhat important
 3. Important
 4. Very important
 5. Don't know or no response
-

Q# 69

Manage access to highways along heavily traveled corridors

1. Not important
2. Somewhat important
3. Important
4. Very important
5. Don't know or no response

Q# 70

Help local jurisdictions with land use planning associated with transportation

1. Not important
 2. Somewhat important
 3. Important
 4. Very important
 5. Don't know or no response
-

Q# 71

Do you support or oppose putting money collected from motor fuel taxes and vehicle registration fees into:

Bus depots

1. Strongly oppose
2. Oppose
3. Support
4. Strongly support
5. Don't know or no answer

Q# 72

Branch railroad lines

1. Strongly oppose
 2. Oppose
 3. Support
 4. Strongly support
 5. Don't know or no answer
-

Q# 73

Between city bus service

1. Strongly oppose
2. Oppose
3. Support
4. Strongly support
5. Don't know or no answer

Q# 74

Scheduled air service to rural areas

1. Strongly oppose
 2. Oppose
 3. Support
 4. Strongly support
 5. Don't know or no answer
-

Bicycle and pedestrian facilities

1. Strongly oppose
2. Oppose
3. Support
4. Strongly support
5. Don't know or no answer

Programs such as van pools to reduce the use of personal vehicles

1. Strongly oppose
2. Oppose
3. Support
4. Strongly support
5. Don't know or no answer

Q# 77

Assistance to local governments for land use planning associated with transportation

1. Strongly oppose
2. Oppose
3. Support
4. Strongly support
5. Don't know or no answer

Q# 78

As you probably know, different types of people have different types of opinions. The following questions are for statistical purposes only

What is your age

ENTER THEIR ANSWER AND THEN PRESS ENTER. USE 100 FOR 100 OR OLDER, 101 FOR DON'T KNOW AND 102 FOR NO RESPONSE.

Q# 79

What is the highest level of education you have completed?

TYPE IN THEIR ANSWER AND PRESS ENTER. 12 IS HIGH SCHOOL GRAD, 16 IS COLLEGE GRAD, 18 IS MASTERS DEGREE AND 20 IS DOCTORATE. USE 21 FOR DON'T KNOW AND 22 FOR NO RESPONSE.

Q# 80

Were you born in Montana?

1. Yes
2. No
3. Don't know or no response

Q# 81

How long have you lived in Montana?

TYPE IN THEIR ANSWER AND PRESS ENTER. 100 IS 100 OR LONGER, 101 IS DON'T KNOW
AND 102 IS NO RESPONSE

Q# 82

RESPONDENT'S SEX: DON'T ASK

1. MALE
 2. FEMALE
 3. CANNOT TELL
-

That was the last question. Thank you very much for your time and cooperation.
Good bye and have a nice day (or evening).

TRANPLAN 21 APPENDIX D
SOCIAL AND ECONOMIC DATA



TRANSLATION II APPENDIX D
SOCIAL AND ECONOMIC DATA

**Total Wages, Salaries and Business Profits
Projected Percent Change 1990 - 2010**

	<u>Total 1990</u> (\$ Millions)	<u>Total 2010</u> (\$ Millions)	<u>Total Change 1990 - 2010</u> (\$ Millions)	<u>Percent Change 1990 - 2010</u>	<u>Average Annual Percent Change 1990 - 2010</u>
Montana	6756.4	11003.8	4247.4	62.86%	3.14%
Northwest District					
FLATHEAD	511.0	911.9	400.9	78.45%	3.92%
GRANITE	17.2	28.8	11.6	67.44%	3.37%
LAKE	116.8	217.4	100.6	86.13%	4.31%
LINCOLN	134.7	203.6	68.9	51.15%	2.56%
MINERAL	20.6	32.0	11.4	55.34%	2.77%
MISSOULA	776.0	1281.9	505.9	65.19%	3.26%
POWELL	46.1	64.6	18.5	40.13%	2.01%
RAVALLI	121.6	252.7	131.1	107.81%	5.39%
SANDERS	45.3	75.8	30.5	67.33%	3.37%
Subtotal	1789.3	3068.7	1279.4	71.50%	3.58%
Southwest District					
BEAVERHEAD	68.4	107.6	39.2	57.31%	2.87%
BROADWATER	18.1	32.7	14.6	80.66%	4.03%
DEER LODGE	54.1	86.9	32.8	60.63%	3.03%
GALLATIN	418.9	860.2	441.3	105.35%	5.27%
JEFFERSON	53.7	138.2	84.5	157.36%	7.87%
MADISON	36.1	64.8	28.7	79.50%	3.98%
MEAGHER	12.1	19.3	7.2	59.50%	2.98%
PARK	90.5	143.7	53.2	58.78%	2.94%
SILVER BOW	283.3	400.9	117.6	41.51%	2.08%
Subtotal	1035.2	1854.3	819.1	79.12%	3.96%
Northcentral District					
BLAINE	39.5	59.4	19.9	50.38%	2.52%
CASCADE	742.7	999.6	256.9	34.59%	1.73%
CHOUTEAU	37.7	56.5	18.8	49.87%	2.49%
GLACIER	86.5	120.9	34.4	39.77%	1.99%
HILL	127.8	186.9	59.1	46.24%	2.31%
LEWIS & CLARK	491.4	808.1	316.7	64.45%	3.22%
LIBERTY	22.3	26.3	4.0	17.94%	0.90%
PONDERA	36.7	59.6	22.9	62.40%	3.12%
TETON	44.0	71.1	27.1	61.59%	3.08%
TOOLE	48.4	63.8	15.4	31.82%	1.59%
Subtotal	1677.0	2452.2	775.2	46.23%	2.31%

**Total Wages, Salaries and Business Profits
Projected Percent Change 1990 - 2010**

	<u>Total</u> <u>1990</u> (\$ Millions)	<u>Total</u> <u>2010</u> (\$ Millions)	<u>Total</u> <u>Change</u> <u>1990 - 2010</u> (\$ Millions)	<u>Percent</u> <u>Change</u> <u>1990 - 2010</u>	<u>Average Annual</u> <u>Percent Change</u> <u>1990 - 2010</u>
Eastern District					
CARTER	10.4	14.7	4.3	41.35%	2.07%
CUSTER	96.6	138.3	41.7	43.17%	2.16%
DANIELS	18.9	23.9	5.0	26.46%	1.32%
DAWSON	73.0	103.0	30.0	41.10%	2.05%
FALLON	31.3	40.0	8.7	27.80%	1.39%
GARFIELD	15.6	18.6	3.0	19.23%	0.96%
MCCONE	17.5	22.0	4.5	25.71%	1.29%
PHILLIPS	47.2	58.3	11.1	23.52%	1.18%
POWDER RIVER	16.2	22.5	6.3	38.89%	1.94%
PRAIRIE	10.4	12.9	2.5	24.04%	1.20%
RICHLAND	88.1	140.0	51.9	58.91%	2.95%
ROOSEVELT	71.3	113.3	42.0	58.91%	2.95%
ROSEBUD	117.2	231.4	114.2	97.44%	4.87%
SHERIDAN	34.5	44.1	9.6	27.83%	1.39%
VALLEY	61.9	98.6	36.7	59.29%	2.96%
WIBAUX	6.3	10.2	3.9	61.90%	3.10%
Subtotal	716.4	1091.8	375.4	52.40%	2.62%
Southcentral District					
BIG HORN	89.4	159.9	70.5	78.86%	3.94%
CARBON	37.1	65.3	28.2	76.01%	3.80%
FERGUS	79.8	139.5	59.7	74.81%	3.74%
GOLDEN VALLEY	6.7	8.1	1.4	20.90%	1.04%
JUDITH BASIN	13.6	24.1	10.5	77.21%	3.86%
MUSSELSHELL	25.0	37.1	12.1	48.40%	2.42%
PETROLEUM	4.2	4.1	-0.1	-2.38%	-0.12%
STILLWATER	51.8	75.8	24.0	46.33%	2.32%
SWEET GRASS	20.6	32.0	11.4	55.34%	2.77%
TREASURE	8.6	9.8	1.2	13.95%	0.70%
WHEATLAND	16.3	22.3	6.0	36.81%	1.84%
YELLOWSTONE	1185.6	1959.4	773.8	65.27%	3.26%
Subtotal	1538.7	2537.4	998.7	64.91%	3.25%

Source: NPA Data Services

**Total Population Change
Projected Percent Change 1990 - 2010**

	Population 1990 (Thousands)	Population 2010 (Thousands)	Total Change 1990 - 2010 (Thousands)	Percent Change 1990 - 2010	Average Annual Percent Change 1990 - 2010
Montana	798.8	922.9	124.1	15.54%	0.78%
Northwest District					
FLATHEAD	59.2	79.1	19.9	33.61%	1.68%
GRANITE	2.6	2.6	0	0.00%	0.00%
LAKE	21	27.7	6.7	31.90%	1.60%
LINCOLN	17.5	18.4	0.9	5.14%	0.26%
MINERAL	3.3	3.7	0.4	12.12%	0.61%
MISSOULA	78.7	99.7	21	26.68%	1.33%
POWELL	6.6	7	0.4	6.06%	0.30%
RAVALLI	25	35.6	10.6	42.40%	2.12%
SANDERS	8.7	10.1	1.4	16.09%	0.80%
Subtotal	222.6	283.9	61.3	27.54%	1.38%
Southwest District					
BEAVERHEAD	8.4	9.2	0.8	9.52%	0.48%
BROADWATER	3.3	4	0.7	21.21%	1.06%
DEER LODGE	10.3	9.4	-0.9	-8.74%	-0.44%
GALLATIN	50.4	66.4	16	31.75%	1.59%
JEFFERSON	7.9	9.5	1.6	20.25%	1.01%
MADISON	6	7.1	1.1	18.33%	0.92%
MEAGHER	1.8	1.8	0	0.00%	0.00%
PARK	14.6	17	2.4	16.44%	0.82%
SILVER BOW	33.9	32.6	-1.3	-3.83%	-0.19%
Subtotal	136.6	157	20.4	14.93%	0.75%
Northcentral District					
BLAINE	6.7	7.1	0.4	5.97%	0.30%
CASCADE	77.7	79	1.3	1.67%	0.08%
CHOUTEAU	5.5	5.2	-0.3	-5.45%	-0.27%
GLACIER	12.1	13.1	1	8.26%	0.41%
HILL	17.7	18.3	0.6	3.39%	0.17%
LEWIS & CLARK	47.5	56.8	9.3	19.58%	0.98%
LIBERTY	2.3	2.3	0	0.00%	0.00%
PONDERA	6.4	6.3	-0.1	-1.56%	-0.08%
TETON	6.3	6.5	0.2	3.17%	0.16%
TOOLE	5	4.8	-0.2	-4.00%	-0.20%
Subtotal	187.2	199.4	12.2	6.52%	0.33%

**Total Population Change
Projected Percent Change 1990 - 2010**

	Population <u>1990</u> (Thousands)	Population <u>2010</u> (Thousands)	Total Change <u>1990 - 2010</u> (Thousands)	Percent Change <u>1990 - 2010</u>	Average Annual Percent Change <u>1990 - 2010</u>
Eastern District					
CARTER	1.5	1.3	-0.2	-13.33%	-0.67%
CUSTER	11.7	12.1	0.4	3.42%	0.17%
DANIELS	2.3	1.8	-0.5	-21.74%	-1.09%
DAWSON	9.5	9.1	-0.4	-4.21%	-0.21%
FALLON	3.1	2.9	-0.2	-6.45%	-0.32%
GARFIELD	1.6	1.5	-0.1	-6.25%	-0.31%
MCCONE	2.3	2	-0.3	-13.04%	-0.65%
PHILLIPS	5.2	5.2	0	0.00%	0.00%
POWDER RIVER	2.1	1.9	-0.2	-9.52%	-0.48%
PRAIRIE	1.4	1.3	-0.1	-7.14%	-0.36%
RICHLAND	10.7	10.9	0.2	1.87%	0.09%
ROOSEVELT	11	10.9	-0.1	-0.91%	-0.05%
ROSEBUD	10.5	13.3	2.8	26.67%	1.33%
SHERIDAN	4.7	4	-0.7	-14.89%	-0.74%
VALLEY	8.2	7.3	-0.9	-10.98%	-0.55%
WIBAUX	1.2	1.1	-0.1	-8.33%	-0.42%
Subtotal	87	86.6	-0.4	-0.46%	-0.02%
Southcentral District					
BIG HORN	11.3	12.9	1.6	14.16%	0.71%
CARBON	8.1	9	0.9	11.11%	0.56%
FERGUS	12.1	12.6	0.5	4.13%	0.21%
GOLDEN VALLEY	0.9	1	0.1	11.11%	0.56%
JUDITH BASIN	2.3	2.2	-0.1	-4.35%	-0.22%
MUSSELSHELL	4.1	4.6	0.5	12.20%	0.61%
PETROLEUM	0.5	0.5	0	0.00%	0.00%
STILLWATER	6.5	8.3	1.8	27.69%	1.38%
SWEET GRASS	3.2	3.4	0.2	6.25%	0.31%
TREASURE	0.9	0.9	0	0.00%	0.00%
WHEATLAND	2.3	2.3	0	0.00%	0.00%
YELLOWSTONE	113.4	138.8	25.4	22.40%	1.12%
Subtotal	165.6	196.5	30.9	18.66%	0.93%

Source: NPA Data Services

Cash Receipts From Farm Marketings - 1991
(\$ Thousands)

MONTANA **1,502,033**

Northwest District

FLATHEAD	23209
GRANITE	8983
LAKE	36694
LINCOLN	2257
MINERAL	734
MISSOULA	5777
POWELL	17017
RAVALLI	22308
SANDERS	9084
Subtotal	126063

Southwest District

BEAVERHEAD	52368
BROADWATER	13903
DEER LODGE	4792
GALLATIN	55024
JEFFERSON	7829
MADISON	30893
MEAGHER	15846
PARK	19029
SILVER BOW	2513
Subtotal	202197

Northcentral District

BLAINE	24249
CASCADE	47606
CHOUTEAU	105458
GLACIER	53289
HILL	75203
LEWIS & CLARK	20971
LIBERTY	43587
PONDERA	54167
TETON	80093
TOOLE	47477
Subtotal	552100

Eastern District

CARTER	20480
CUSTER	30736
DANIELS	23611
DAWSON	28425
FALLON	16924
GARFIELD	18068
MCCONE	13349
PHILLIPS	32743
POWDER RIVER	22134
PRAIRIE	20948
RICHLAND	63876
ROOSEVELT	28886
ROSEBUD	35777
SHERIDAN	30430
VALLEY	44825
WIBAUX	6916
Subtotal	438128

Southcentral District

BIG HORN	57971
CARBON	41536
FERGUS	41691
GOLDEN VALLEY	12368
JUDITH BASIN	23560
MUSSELSHELL	15461
PETROLEUM	11394
STILLWATER	30808
SWEET GRASS	14925
TREASURE	16186
WHEATLAND	18145
YELLOWSTONE	118581
Subtotal	402626

Source: Montana Agricultural Statistics Service

Wages, Salaries and Business Income From Mining Activity - 1993

MONTANA		\$250,100,000	
Northwest District		Eastern District	
FLATHEAD	\$ 2,500,000	CARTER	\$ 0
GRANITE	900,000	CUSTER	300,000
LAKE	600,000	DANIELS	0
LINCOLN	16,100,000	DAWSON	2,700,000
MINERAL	0	FALLON	4,900,000
MISSOULA	2,800,000	GARFIELD	200,000
POWELL	4,400,000	MCCONE	0
RAVALLI	800,000	PHILLIPS	15,400,000
SANDERS	500,000	POWDER RIVER	0
Subtotal	28,600,000	PRAIRIE	0
Southwest District		RICHLAND	10,900,000
BEAVERHEAD	\$ 4,600,000	ROOSEVELT	1,000,000
BROADWATER	1,300,000	ROSEBUD	26,100,000
DEER LODGE	700,000	SHERIDAN	1,100,000
GALLATIN	5,400,000	VALLEY	0
JEFFERSON	19,100,000	WIBAUX	100,000
MADISON	5,600,000	Subtotal	54,600,000
MEAGHER	300,000	Southcentral District	
PARK	4,200,000	BIG HORN	\$ 30,100,000
SILVER BOW	24,100,000	CARBON	700,000
Subtotal	65,300,000	FERGUS	5,700,000
Northcentral District		GOLDEN VALLEY	0
BLAINE	\$ 0	JUDITH BASIN	0
CASCADE	1,800,000	MUSSELSHELL	3,200,000
CHOUTEAU	0	PETROLEUM	0
GLACIER	5,100,000	STILLWATER	19,500,000
HILL	1,100,000	SWEET GRASS	0
LEWIS & CLARK	4,900,000	TREASURE	0
LIBERTY	100,000	WHEATLAND	0
PONDERA	600,000	YELLOWSTONE	17,300,000
TETON	0	Subtotal	40,000,000
TOOLE	3,600,000		
Subtotal	17,200,000		

Source: NPA Data Services

Total Labor Earnings - 1992

Estimated Labor Earnings From Lumber and Wood Products, 1992

MONTANA	\$ 292,837,000
FLATHEAD	75,914,000
MISSOULA	61,511,000
LINCOLN	46,567,000
RAVALLI	16,998,000
LAKE	13,755,000
SANDERS	10,532,000
POWELL	7,305,000
PARK	6,034,000
FERGUS	3,316,000
LEWIS & CLARK	2,940,000
CASCADE	2,307,000
STILLWATER	1,948,000
YELLOWSTONE	1,680,000
JUDITH BASIN	927,000
BIG HORN	840,000
SHERIDAN	389,000
BEAVERHEAD	291,000
TETON	211,000
SILVER BOW	173,000
MADISON	76,000
Subtotal	\$ 253,714,000

The following counties have wood and lumber products manufacturing, however, total earnings data is not available:

BROADWATER	GLACIER	MINERAL
CARBON	GRANITE	MUSSELSHELL
CHOUTEAU	HILL	ROSEBUD
DEER LODGE	JEFFERSON	SWEET GRASS
GALLATIN	MEAGHER	WHEATLAND

Source: U.S. Bureau of Economic Analysis

**Manufacturing Wages, Salaries and Business Profits
Projected Percent Change 1990 - 2010**

	<u>Total</u> <u>1990</u> (\$ Millions)	<u>Total</u> <u>2010</u> (\$ Millions)	<u>Total</u> <u>Change</u> <u>1990 - 2010</u> (\$ Millions)	<u>Percent</u> <u>Change</u> <u>1990 - 2010</u>	<u>Average Annual</u> <u>Percent Change</u> <u>1990 - 2010</u>
Montana	561.6	728.8	167.2	29.77%	1.49%
Northwest District					
FLATHEAD	109.8	135.8	26.0	23.68%	1.18%
GRANITE	4.2	8.8	4.6	109.52%	5.48%
LAKE	13.6	23.2	9.6	70.59%	3.53%
LINCOLN	41.1	49.8	8.7	21.17%	1.06%
MINERAL	6.0	7.4	1.4	23.33%	1.17%
MISSOULA	113.4	141.2	27.8	24.51%	1.23%
POWELL	6.1	9.1	3.0	49.18%	2.46%
RAVALLI	17.4	35.2	17.8	102.30%	5.11%
SANDERS	9.8	16.1	6.3	64.29%	3.21%
Subtotal	321.4	426.6	105.2	32.73%	1.64%
Southwest District					
BEAVERHEAD	1.5	3.8	2.3	153.33%	7.67%
BROADWATER	2.5	3.5	1.0	40.00%	2.00%
DEER LODGE	3.0	2.3	-0.7	-23.33%	-1.17%
GALLATIN	33.3	59.4	26.1	78.38%	3.92%
JEFFERSON	3.3	5.7	2.4	72.73%	3.64%
MADISON	1.2	2.7	1.5	125.00%	6.25%
MEAGHER	0.3	0.3	0	0.00%	0.00%
PARK	5.1	7.0	1.9	37.25%	1.86%
SILVER BOW	13.6	15.2	1.6	11.76%	0.59%
Subtotal	63.8	99.9	36.1	56.58%	2.83%
Northcentral District					
BLAINE	0.4	0.3	-0.1	-25.00%	-1.25%
CASCADE	23.2	5.7	-17.5	-75.43%	-3.77%
CHOUTEAU	0.3	0.8	0.5	166.67%	8.33%
GLACIER	1.4	2.8	1.4	100.00%	5.00%
HILL	2.6	3.2	0.6	23.08%	1.15%
LEWIS & CLARK	20.9	22.2	1.3	6.22%	0.31%
LIBERTY	0.1	0.2	0.1	100.00%	5.00%
PONDERA	1.3	2.9	1.6	123.08%	6.15%
TETON	0.9	1.3	0.4	44.44%	2.22%
TOOLE	0.4	0.5	0.1	25.00%	1.25%
Subtotal	51.1	39.6	-11.5	-22.50%	-1.13%

Manufacturing Wages, Salaries and Business Profits Projected Percent Change 1990 - 2010

	<u>Total</u> <u>1990</u> (\$ Millions)	<u>Total</u> <u>2010</u> (\$ Millions)	<u>Total</u> <u>Change</u> <u>1990 - 2010</u> (\$ Millions)	<u>Percent</u> <u>Change</u> <u>1990 - 2010</u>	<u>Average Annual</u> <u>Percent Change</u> <u>1990 - 2010</u>
Eastern District					
CARTER	0	0	0	0.00%	0.00%
CUSTER	1.8	3.5	1.7	94.44%	4.72%
DANIELS	0	0.1	0.1	0.00%	0.00%
DAWSON	1.3	1.6	0.3	23.08%	1.15%
FALLON	0.2	0.3	0.1	50.00%	2.50%
GARFIELD	0	0.1	0.1	0.00%	0.00%
MCCONE	0	0	0	0.00%	0.00%
PHILLIPS	0.5	0.8	0.3	60.00%	3.00%
POWDER RIVER	0	0	0	0.00%	0.00%
PRAIRIE	0.2	0.4	0.2	100.00%	5.00%
RICHLAND	7.3	8.2	0.9	12.33%	0.62%
ROOSEVELT	7.2	15.8	8.6	119.44%	5.97%
ROSEBUD	2.1	2.6	0.5	23.81%	1.19%
SHERIDAN	0.3	0.8	0.5	166.67%	8.33%
VALLEY	1.4	0.4	-1	-71.43%	-3.57%
WIBAUX	0	0.1	0.1	0.00%	0.00%
Subtotal	19	29.1	10.1	53.16%	2.66%
Southcentral District					
BIG HORN	0.6	0.7	0.1	16.67%	0.83%
CARBON	0.9	1.9	1	111.11%	5.56%
FERGUS	2.8	3.9	1.1	39.29%	1.96%
GOLDEN VALLEY	0	0.1	0.1	0.00%	0.00%
JUDITH BASIN	0.1	0.4	0.3	300.00%	15.00%
MUSSELSHELL	0.4	1.1	0.7	175.00%	8.75%
PETROLEUM	0	0	0	0.00%	0.00%
STILLWATER	4.9	10.3	5.4	110.20%	5.51%
SWEET GRASS	0.3	1	0.7	233.33%	11.67%
TREASURE	0	0	0	0.00%	0.00%
WHEATLAND	1.1	2.3	1.2	109.09%	5.45%
YELLOWSTONE	91.6	106.3	14.7	16.05%	0.80%
Subtotal	98.4	121.5	23.1	23.48%	1.17%

Source: NPA Data Services

Accommodations Tax Collections - 1993

MONTANA		\$7,963,585	
Northwest District		Eastern District	
FLATHEAD	\$ 1,088,193	CARTER	\$ 741
GRANITE	10,560	CUSTER	90,028
LAKE	72,449	DANIELS	7,228
LINCOLN	75,881	DAWSON	66,515
MINERAL	44,203	FALLON	10,708
MISSOULA	805,432	GARFIELD	3,694
POWELL	34,778	MCCONE	3,694
RAVALLI	72,609	PHILLIPS	28,181
SANDERS	27,827	POWDER RIVER	7,631
Subtotal	2,231,932	PRAIRIE	2,737
		RICHLAND	25,734
Southwest District		ROOSEVELT	28,035
BEAVERHEAD	\$ 103,598	ROSEBUD	28,770
BROADWATER	12,369	SHERIDAN	18,910
DEER LODGE	14,971	VALLEY	57,377
GALLATIN	1,478,057	WIBAUX	2,737
JEFFERSON	17,001	Subtotal	382,720
MADISON	74,474		
MEAGHER	29,236		
PARK	319,400		
SILVER BOW	427,975		
Subtotal	2,477,081		
		Southcentral District	
Northcentral District		BIG HORN	\$ 60,060
BLAINE	\$ 15,421	CARBON	102,845
CASCADE	615,304	FERGUS	76,239
CHOUTEAU	5,420	GOLDEN VALLEY	741
GLACIER	292,155	JUDITH BASIN	2,348
HILL	91,528	MUSSELSHELL	6,244
LEWIS & CLARK	410,395	PETROLEUM	2,348
LIBERTY	2,348	STILLWATER	28,268
PONDERA	16,476	SWEET GRASS	32,535
TETON	12,739	TREASURE	741
TOOLE	46,362	WHEATLAND	6,891
Subtotal	1,508,148	YELLOWSTONE	1,041,391
		Subtotal	1,360,651

Source: Montana Department of Commerce

Per Capita Private Service Earnings
Projected Percent Change 1990 - 2010

	<u>Total</u> <u>1990</u> (\$ Millions)	<u>Total</u> <u>2010</u> (\$ Millions)	<u>Total</u> <u>Change</u> <u>1990 - 2010</u> (\$ Millions)	<u>Percent</u> <u>Change</u> <u>1990 - 2010</u>	<u>Average Annual</u> <u>Percent Change</u> <u>1990 - 2010</u>
Montana	3114.3	5698.4	2584.1	82.98%	4.15%
Northwest District					
FLATHEAD	235.5	502.2	266.7	113.25%	5.66%
GRANITE	3.4	6.2	2.8	82.35%	4.12%
LAKE	56.6	115.9	59.3	104.77%	5.24%
LINCOLN	32.4	60.7	28.3	87.35%	4.37%
MINERAL	6.2	11.8	5.6	90.32%	4.52%
MISSOULA	384.5	717.0	332.5	86.48%	4.32%
POWELL	10.4	17.1	6.7	64.42%	3.22%
RAVALLI	50.9	114.0	63.1	123.97%	6.20%
SANDERS	12.9	25.2	12.3	95.35%	4.77%
Subtotal	792.8	1570.1	777.3	98.04%	4.90%
Southwest District					
BEAVERHEAD	20.9	40.4	19.5	93.30%	4.67%
BROADWATER	5.4	11.0	5.6	103.70%	5.19%
DEER LODGE	21.3	40.8	19.5	91.55%	4.58%
GALLATIN	207.9	451.6	243.7	117.22%	5.86%
JEFFERSON	10.0	30.3	20.3	203.00%	10.15%
MADISON	10.6	19.2	8.6	81.13%	4.06%
MEAGHER	4.1	6.9	2.8	68.29%	3.41%
PARK	39.6	75.9	36.3	91.67%	4.58%
SILVER BOW	141.3	222.9	81.6	57.75%	2.89%
Subtotal	461.1	899.0	437.9	94.97%	4.75%
Northcentral District					
BLAINE	13.2	24.6	11.4	86.36%	4.32%
CASCADE	409.1	622.7	213.6	52.21%	2.61%
CHOUTEAU	10.5	17.5	7.0	66.67%	3.33%
GLACIER	32.3	52.8	20.5	63.47%	3.17%
HILL	59.3	97.0	37.7	63.58%	3.18%
LEWIS & CLARK	236.1	450.6	214.5	90.85%	4.54%
LIBERTY	4.3	6.1	1.8	41.86%	2.09%
PONDERA	16.1	27.8	11.7	72.67%	3.63%
TETON	12.6	27.2	14.6	115.87%	5.79%
TOOLE	16.9	23.6	6.7	39.64%	1.98%
Subtotal	797.2	1325.3	528.1	66.24%	3.31%

**Per Capita Private Service Earnings
Projected Percent Change 1990 - 2010**

	<u>Total</u> <u>1990</u> (\$ Millions)	<u>Total</u> <u>2010</u> (\$ Millions)	<u>Total</u> <u>Change</u> <u>1990 - 2010</u> (\$ Millions)	<u>Percent</u> <u>Change</u> <u>1990 - 2010</u>	<u>Average Annual</u> <u>Percent Change</u> <u>1990 - 2010</u>
Eastern District					
CARTER	2.2	2.9	0.7	31.82%	1.59%
CUSTER	43.5	68.6	25.1	57.70%	2.89%
DANIELS	6.7	9.3	2.6	38.81%	1.94%
DAWSON	27.2	46.8	19.6	72.06%	3.60%
FALLON	7.4	9.8	2.4	32.43%	1.62%
GARFIELD	1.8	3.4	1.6	88.89%	4.44%
MCCONE	3.6	6.0	2.4	66.67%	3.33%
PHILLIPS	12.1	19.8	7.7	63.64%	3.18%
POWDER RIVER	3.4	6.0	2.6	76.47%	3.82%
PRAIRIE	2.2	3.3	1.1	50.00%	2.50%
RICHLAND	32.6	56.4	23.8	73.01%	3.65%
ROOSEVELT	30.7	46.4	15.7	51.14%	2.56%
ROSEBUD	25.0	55.2	30.2	120.80%	6.04%
SHERIDAN	14.4	18.1	3.7	25.69%	1.28%
VALLEY	26.6	50.2	23.6	88.72%	4.44%
WIBAUX	1.8	3.5	1.7	94.44%	4.72%
Subtotal	148.8	258.9	110.1	73.99%	3.70%
Southcentral District					
BIG HORN	20.0	39.2	19.2	96.00%	4.80%
CARBON	14.0	28.2	14.2	101.43%	5.07%
FERGUS	36.4	64.7	28.3	77.75%	3.89%
GOLDEN VALLEY	0.8	1.2	0.4	50.00%	2.50%
JUDITH BASIN	2.9	4.7	1.8	62.07%	3.10%
MUSSELSHELL	8.8	13.4	4.6	52.27%	2.61%
PETROLEUM	0.5	0.6	0.1	20.00%	1.00%
STILLWATER	11.6	17.6	6.0	51.72%	2.59%
SWEET GRASS	7.1	10.8	3.7	52.11%	2.61%
TREASURE	2.2	3.2	1.0	45.45%	2.27%
WHEATLAND	4.3	7.6	3.3	76.74%	3.84%
YELLOWSTONE	701.9	1282.9	581.0	82.78%	4.14%
Subtotal	740.1	1342.0	601.9	81.33%	4.07%

Source: NPA Data Services

Projected Per Capita Income - 2010

	<u>Total</u> <u>1990</u> (\$ Millions)	<u>Total</u> <u>2010</u> (\$ Millions)	<u>Total</u> <u>Change</u> <u>1990 - 2010</u> (\$ Millions)	<u>Percent</u> <u>Change</u> <u>1990 - 2010</u>	<u>Average Annual</u> <u>Percent Change</u> <u>1990 - 2010</u>
Montana	13348.0	17661.2	4313.2	32.31%	1.58%
Northwest District					
FLATHEAD	13511.3	17149.5	3638.2	26.93%	1.34%
GRANITE	13678.1	18972.1	5294.0	38.70%	1.88%
LAKE	11125.7	15156.8	4031.1	36.23%	1.80%
LINCOLN	11023.2	15570.8	4547.6	41.25%	2.03%
MINERAL	10304.5	14681.7	4377.2	42.48%	2.12%
MISSOULA	13592.5	17612.5	4020.0	29.58%	1.46%
POWELL	11543.9	15697.5	4153.6	35.98%	1.76%
RAVALLI	11484.9	15449.4	3964.5	34.52%	1.72%
SANDERS	9708.0	13813.0	4105.0	42.28%	2.11%
Subtotal	105972.1	144103.3	38131.2	35.98%	1.80%
Southwest District					
BEAVERHEAD	13062.5	16926.5	3864.0	29.58%	1.43%
BROADWATER	11145.9	16849.2	5703.3	51.17%	2.51%
DEER LODGE	10582.9	13569.5	2986.6	28.22%	1.44%
GALLATIN	12834.1	17560.0	4725.9	36.82%	1.80%
JEFFERSON	14323.1	22273.7	7950.6	55.51%	2.67%
MADISON	11532.1	16570.0	5037.9	43.69%	2.13%
MEAGHER	12335.5	17199.7	4864.2	39.43%	1.92%
PARK	11527.7	15401.8	3874.1	33.61%	1.67%
SILVER BOW	13756.7	16749.0	2992.3	21.75%	1.10%
Subtotal	111100.5	153099.4	41998.9	37.80%	1.89%
Northcentral District					
BLAINE	11056.4	15849.9	4793.5	43.35%	2.12%
CASCADE	14790.7	19162.2	4371.5	29.56%	1.44%
CHOUTEAU	14829.4	19882.6	5053.2	34.08%	1.62%
GLACIER	10267.5	14487.4	4219.9	41.10%	2.03%
HILL	12059.4	16320.0	4260.6	35.33%	1.75%
LEWIS & CLARK	14399.9	18786.5	4386.6	30.46%	1.50%
LIBERTY	17069.3	20886.6	3817.3	22.36%	1.01%
PONDERA	12333.7	17330.4	4996.7	40.51%	1.98%
TETON	13713.8	18123.5	4409.7	32.16%	1.55%
TOOLE	15194.9	20455.0	5260.1	34.62%	1.65%
Subtotal	135715.0	181284.1	45569.1	33.58%	1.68%

Projected Per Capita Income - 2010

	<u>Total</u> <u>1990</u> (\$ Millions)	<u>Total</u> <u>2010</u> (\$ Millions)	<u>Total</u> <u>Change</u> <u>1990 - 2010</u> (\$ Millions)	<u>Percent</u> <u>Change</u> <u>1990 - 2010</u>	<u>Average Annual</u> <u>Percent Change</u> <u>1990 - 2010</u>
Eastern District					
CARTER	12819.0	18813.8	5994.8	46.76%	2.20%
CUSTER	14063.5	18308.6	4245.1	30.19%	1.47%
DANIELS	15520.5	19547.0	4026.5	25.94%	1.22%
DAWSON	12660.5	17314.3	4653.8	36.76%	1.80%
FALLON	14627.9	20169.3	5541.4	37.88%	1.81%
GARFIELD	15379.5	20345.6	4966.1	32.29%	1.46%
MCCONE	12798.2	18192.1	5393.9	42.15%	2.00%
PHILLIPS	13418.6	18455.2	5036.6	37.53%	1.83%
POWDER RIVER	13161.9	18836.5	5674.6	43.11%	2.03%
PRAIRIE	14387.6	19047.0	4659.4	32.38%	1.53%
RICHLAND	12928.7	17417.8	4489.1	34.72%	1.70%
ROOSEVELT	10569.9	15000.0	4430.1	41.91%	2.07%
ROSEBUD	12176.3	17901.4	5725.1	47.02%	2.24%
SHERIDAN	14367.0	17731.9	3364.9	23.42%	1.12%
VALLEY	13498.7	18144.9	4646.2	34.42%	1.68%
WIBAUX	12313.2	17975.6	5662.4	45.99%	2.22%
Subtotal	214691.0	293201.0	78510.0	36.57%	1.83%
Southcentral District					
BIG HORN	10570.8	16290.9	5720.1	54.11%	2.59%
CARBON	12496.0	17100.7	4604.7	36.85%	1.79%
FERGUS	12745.8	17749.2	5003.4	39.26%	1.93%
GOLDEN VALLEY	14086.6	19282.1	5195.5	36.88%	1.71%
JUDITH BASIN	12875.1	19108.9	6233.8	48.42%	2.34%
MUSSELSHELL	12869.6	17523.1	4653.5	36.16%	1.76%
PETROLEUM	11148.4	16228.3	5079.9	45.57%	2.16%
STILLWATER	14571.0	20720.4	6149.4	42.20%	2.03%
SWEET GRASS	14729.8	18974.9	4245.1	28.82%	1.39%
TREASURE	16345.5	19797.2	3451.7	21.12%	0.97%
WHEATLAND	13680.2	17420.6	3740.4	27.34%	1.33%
YELLOWSTONE	15058.6	19280.5	4221.9	28.04%	1.37%
Subtotal	161177.4	219476.8	58299.4	36.17%	1.81%

Source: NPA Data Services

Projected Growth in Population Over the Age of 75

	<u>Total</u> <u>1990</u> (thousands)	<u>Total</u> <u>2010</u> (thousands)	<u>Total</u> <u>Change</u> <u>1990 - 2010</u> (thousands)	<u>Percent</u> <u>Change</u> <u>1990 - 2010</u>
Montana	45.79	50.71	4.92	11%
Northwest District				
FLATHEAD	3.19	3.49	0.30	9%
GRANITE	0.19	0.30	0.11	58%
LAKE	1.44	1.80	0.36	25%
LINCOLN	0.80	0.95	0.15	19%
MINERAL	0.15	0.17	0.02	13%
MISSOULA	3.52	4.40	0.88	25%
POWELL	0.42	0.50	0.08	19%
RAVALLI	1.75	1.58	-0.17	-10%
SANDERS	0.60	0.60	0.00	0%
Subtotal	12.06	13.79	1.73	14%
Southwest District				
BEAVERHEAD	0.51	0.41	-0.1	-20%
BROADWATER	0.22	0.29	0.07	32%
DEER LODGE	0.84	0.77	-0.07	-8%
GALLATIN	1.82	2.36	0.54	30%
JEFFERSON	0.34	0.27	-0.07	-21%
MADISON	0.47	0.42	-0.05	-11%
MEAGHER	0.11	0.10	-0.01	-9%
PARK	0.99	0.92	-0.07	-7%
SILVER BOW	2.62	2.31	-0.31	-12%
Subtotal	7.92	7.85	-0.07	-1%
Northcentral District				
BLAINE	0.40	0.30	-0.10	-25%
CASCADE	4.22	5.06	0.84	20%
CHOUTEAU	0.40	0.45	0.05	13%
GLACIER	0.49	0.78	0.29	59%
HILL	0.91	1.02	0.11	12%
LEWIS & CLARK	2.33	3.30	0.97	42%
LIBERTY	0.17	0.22	0.05	29%
PONDERA	0.50	0.48	-0.02	-4%
TETON	0.53	0.50	-0.03	-6%
TOOLE	0.33	0.38	0.05	15%
Subtotal	10.28	12.49	2.21	21%

Projected Growth in Population Over the Age of 75

	<u>Total</u> <u>1990</u> (Thousands)	<u>Total</u> <u>2010</u> (Thousands)	<u>Total</u> <u>Change</u> <u>1990 - 2010</u> (Thousands)	<u>Percent</u> <u>Change</u> <u>1990 - 2010</u>
Eastern District				
CARTER	0.13	0.11	-0.02	-15%
CUSTER	0.90	0.92	0.02	2%
DANIELS	0.22	0.26	0.04	18%
DAWSON	0.65	0.46	-0.19	-29%
FALLON	0.21	0.19	-0.02	-10%
GARFIELD	0.12	0.14	0.02	17%
MCCONE	0.14	0.19	0.05	36%
PHILLIPS	0.36	0.35	-0.01	-3%
POWDER RIVER	0.13	0.09	-0.04	-31%
PRAIRIE	0.16	0.12	-0.04	-25%
RICHLAND	0.62	0.31	-0.31	-50%
ROOSEVELT	0.53	0.59	0.06	11%
ROSEBUD	0.29	0.36	0.07	24%
SHERIDAN	0.47	0.48	0.01	2%
VALLEY	0.62	0.87	0.25	40%
WIBAU	0.12	0.08	-0.04	-33%
Subtotal	5.67	5.52	-0.15	-3%
Southcentral District				
BIG HORN	0.43	0.51	0.08	19%
CARBON	0.72	0.55	-0.17	-24%
FERGUS	1.13	1.35	0.22	19%
GOLDEN VALLEY	0.08	0.08	0.00	0%
JUDITH BASIN	0.17	0.13	-0.04	-24%
MUSSELSHELL	0.37	0.40	0.03	8%
PETROLEUM	0.03	0.03	0.00	0%
STILLWATER	0.48	0.47	-0.01	-2%
SWEET GRASS	0.33	0.28	-0.05	-15%
TREASURE	0.07	0.06	-0.01	-14%
WHEATLAND	0.21	0.17	-0.04	-19%
YELLOWSTONE	5.86	7.08	1.22	21%
Subtotal	9.88	11.11	1.23	12%

Source: NPA Data Services

Projected Growth in Population Between the Ages of 65 and 74

(continued)

	<u>Total 1990</u>	<u>Total 2010</u>	<u>Total Change 1990 - 2010</u>	<u>Percent Change 1990 - 2010</u>	<u>Average Annual Percent Change 1990 - 2010</u>
Eastern District					
CARTER	160	110	-50	-31.25%	-1.56%
CUSTER	1120	930	-190	-16.96%	-0.85%
DANIELS	280	170	-110	-39.29%	-1.96%
DAWSON	790	590	-200	-25.32%	-1.27%
FALLON	260	160	-100	-38.46%	-1.92%
GARFIELD	150	100	-50	-33.33%	-1.67%
MCCONE	240	140	-100	-41.67%	-2.08%
PHILLIPS	440	400	-40	-9.09%	-0.45%
POWDER RIVER	200	160	-40	-20.00%	-1.00%
PRAIRIE	190	90	-100	-52.63%	-2.63%
RICHLAND	820	490	-330	-40.24%	-2.01%
ROOSEVELT	680	600	-80	-11.76%	-0.59%
ROSEBUD	450	560	110	24.44%	1.22%
SHERIDAN	550	340	-210	-38.18%	-1.91%
VALLEY	780	790	10	1.28%	0.06%
WIBAUX	120	60	-60	-50.00%	-2.50%
Subtotal	7230	5690	-1540	-21.30%	-1.07%
Southcentral District					
BIG HORN	580	880	300	51.72%	2.59%
CARBON	870	590	-280	-32.18%	-1.61%
FERGUS	1270	1220	-50	-3.94%	-0.20%
GOLDEN VALLEY	100	80	-20	-20.00%	-1.00%
JUDITH BASIN	250	210	-40	-16.00%	-0.80%
MUSSELSHELL	450	340	-110	-24.44%	-1.22%
PETROLEUM	50	60	10	20.00%	1.00%
STILLWATER	610	620	10	1.64%	0.08%
SWEET GRASS	330	310	-20	-6.06%	-0.30%
TREASURE	80	50	-30	-37.50%	-1.88%
WHEATLAND	260	190	-70	-26.92%	-1.35%
YELLOWSTONE	8120	6930	-1190	-14.66%	-0.73%
Subtotal	12970	11480	-1490	-11.49%	-0.57%

Source: NPA Data Services

Household Size by County

	<u>Total 1990</u>	<u>Total 2010</u>	<u>Total Change 1990 - 2010</u>	<u>Percent Change 1990 - 2010</u>	<u>Average Annual Percent Change 1990 - 2010</u>
MONTANA	2.6	2.43	-0.17	-6.54%	-0.33%
Northwest District					
FLATHEAD	2.59	2.37	-0.22	-8.49%	-0.42%
GRANITE	2.42	2.08	-0.34	-14.05%	-0.70%
LAKE	2.68	2.42	-0.26	-9.70%	-0.49%
LINCOLN	2.61	2.25	-0.36	-13.79%	-0.69%
MINERAL	2.58	2.31	-0.27	-10.47%	-0.52%
MISSOULA	2.55	2.58	0.03	1.18%	0.06%
POWELL	2.95	2.61	-0.34	-11.53%	-0.58%
RAVALLI	2.57	2.33	-0.24	-9.34%	-0.47%
SANDERS	2.54	2.19	-0.35	-13.78%	-0.69%
Average	2.61	2.35	-0.26	-10.00%	-0.50%
Southwest District					
BEAVERHEAD	2.62	2.37	-0.25	-9.54%	-0.48%
BROADWATER	2.59	2.12	-0.47	-18.15%	-0.91%
DEER LODGE	2.52	2.36	-0.16	-6.35%	-0.32%
GALLATIN	2.65	2.62	-0.03	-1.13%	-0.06%
JEFFERSON	2.76	2.24	-0.52	-18.84%	-0.94%
MADISON	2.5	2.26	-0.24	-9.60%	-0.48%
MEAGHER	2.56	2.14	-0.42	-16.41%	-0.82%
PARK	2.58	2.39	-0.19	-7.36%	-0.37%
SILVER BOW	2.44	2.31	-0.13	-5.33%	-0.27%
Average	2.58	2.31	-0.27	-10.38%	-0.52%
Northcentral District					
BLAINE	2.82	2.39	-0.43	-15.25%	-0.76%
CASCADE	2.57	2.49	-0.08	-3.11%	-0.16%
CHOUTEAU	2.63	2.25	-0.38	-14.45%	-0.72%
GLACIER	3.17	2.5	-0.67	-21.14%	-1.06%
HILL	2.74	2.37	-0.37	-13.50%	-0.68%
LEWIS & CLARK	2.54	2.47	-0.07	-2.76%	-0.14%
LIBERTY	2.9	2.39	-0.51	-17.59%	-0.88%
PONDERA	2.86	2.44	-0.42	-14.69%	-0.73%
TETON	2.68	2.26	-0.42	-15.67%	-0.78%
TOOLE	2.62	2.22	-0.4	-15.27%	-0.76%
Average	2.75	2.38	-0.38	-13.62%	-0.68%

Household Size by County

(continued)

	<u>Total</u> <u>1990</u>	<u>Total</u> <u>2010</u>	<u>Total</u> <u>Change</u> <u>1990 - 2010</u>	<u>Percent</u> <u>Change</u> <u>1990 - 2010</u>	<u>Average Annual</u> <u>Percent Change</u> <u>1990 - 2010</u>
Eastern District					
CARTER	2.54	2.3	-0.24	-9.45%	-0.47%
CUSTER	2.52	2.19	-0.33	-13.10%	-0.65%
DANIELS	2.46	2.14	-0.32	-13.01%	-0.65%
DAWSON	2.57	2.37	-0.2	-7.78%	-0.39%
FALLON	2.65	2.4	-0.25	-9.43%	-0.47%
GARFIELD	2.74	2.42	-0.32	-11.68%	-0.58%
MCCONE	2.69	2.32	-0.37	-13.75%	-0.69%
PHILLIPS	2.67	2.3	-0.37	-13.86%	-0.69%
POWDER RIVER	2.59	2.27	-0.32	-12.36%	-0.62%
PRAIRIE	2.43	2.26	-0.17	-7.00%	-0.35%
RICHLAND	2.7	2.41	-0.29	-10.74%	-0.54%
ROOSEVELT	2.97	2.53	-0.44	-14.81%	-0.74%
ROSEBUD	3.01	2.52	-0.49	-16.28%	-0.81%
SHERIDAN	2.48	2.22	-0.26	-10.48%	-0.52%
VALLEY	2.51	2.08	-0.43	-17.13%	-0.86%
WIBAUX	2.62	2.36	-0.26	-9.92%	-0.50%
Average	2.63	2.32	-0.32	-12.00%	-0.60%
Southcentral District					
BIG HORN	3.28	2.68	-0.6	-18.29%	-0.91%
CARBON	2.46	2.31	-0.15	-6.10%	-0.30%
FERGUS	2.62	2.24	-0.38	-14.50%	-0.73%
GOLDEN VALLEY	2.76	2.58	-0.18	-6.52%	-0.33%
JUDITH BASIN	2.5	2.21	-0.29	-11.60%	-0.58%
MUSSELSHELL	2.47	2.22	-0.25	-10.12%	-0.51%
PETROLEUM	2.47	2.07	-0.4	-16.19%	-0.81%
STILLWATER	2.58	2.31	-0.27	-10.47%	-0.52%
SWEET GRASS	2.46	2.21	-0.25	-10.16%	-0.51%
TREASURE	2.57	2.34	-0.23	-8.95%	-0.45%
WHEATLAND	2.64	2.3	-0.34	-12.88%	-0.64%
YELLOWSTONE	2.53	2.52	-0.01	-0.40%	-0.02%
Average	2.61	2.33	-0.28	-10.69%	-0.53%

Source: NPA Data Services

